# United States Court of Appeals for the Second Circuit



**APPENDIX** 

# ORIGINAL 75-7071

# United States Court of Appeals

For the Second Circuit

AMERICAN METAL CLIMAX, INC.,

Plaintiff-Appellee,

against

ESSEX INTERNATIONAL, INC.,

Defendant-Appellant.

Appeal from the United States District Court for the Southern District of New York

# JOINT APPENDIX VOLUME II OF TWO VOLUMES—EXHIBITS

(Pages 1E to 275E)

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Letter to Nichols Wire & Aluminum Company from Essex Wire with Blind Carbon Copy to T. L. Seifert and Carbon Copy to S.p.A. Continues Dated June 7, 1968 bcc: T. L. Seifert ChaliTIFE Px 2 Registered Mail Nichols Wire & Aluminum Company 1725 Rockingham Road P. Q. Box 3808 Davenport, lowa 52808 Attentions Mr. James M. Mouris President Gentlement In April 1966, Essex Wire Corporation contracted to purchase from S.p.A. Continues via Nichols Wire & Aluminum Company, Properzi Continuous Casting and Rolling Equipment Model 8. The last sentence in Paragraph A of Quotation Number 803 (incorporated by reference into the Purchase Order Agreement Number P 3992) states "...the minimal production of the Casting Machine is 14,000 pounds per hour, guaranteed output..." Since November 1967, when the Properzi machinery began operating, to date, the properzi has produced an overage of only 1,831 pounds of aluminum rod per production hour. In fact, when the machinery was operating at its best, it produced only 76,000 pounds of aluminum rod in a seven-hour period (on April 1, 1968) which averages only 11,000 pounds per hour. Essex has spent nearly \$90,000 thus for and incurred the loss of more than one thousand man hours of top management and engineering personnel in attempting to get the machinery to operate at the minimal rate specified in the contract. However, all such time and expenditures appear to have been wasted as the machinery simply will not consistently operate at any where near to the specified minimal rate of 14,000 pounds per hour. It is Essex opinion that the Properzi is not capable of operating at the guaranteed minimal rate because the design of the machinery is simply not perfected to a state where such production is possible. For example, the design of the casting wheel. originally supplied with the mechinery is deficient in that it cannot maintain a production rate of any where close to the minimal specification rate without warping within a

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Nichols Wire & Aluminum Company Page Two June 7, 1968

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extremely short period of time. After consulting with Nichols Aluminum with respect to this problem, Essex, at its expense, installed a wheel built to the specifications supplied by Nichols but the new costing wheel still fails to attain the minimal specification rate.

Also, for example, the iron pouring spout originally supplied with the machinery was defective in that they would only last for an extremely short period of time before burning out.

Because the machinery is basically deficient and incapable of operating at the specification rate, Essex is removing it from the installation at Ferndale, Washington, where the Properzi is on lease to American Metal Climax. (The lease states that if the Properzi fails to live up to specification, Essex shall remove the machinery and restore the site.) The removal of the Properzi is scheduled to begin Tuesday, June 11, 1968. Essex requests to meet with Nichols and Properzi personnel in order to arrange for the satisfactory disposition of the machinery.

Essex also puts Nichols and S.p.A. Continuus on notice that Essex will not accept the second Properzi ordered by Essex, scheduled for shipment in July 1968, unless Essex receives guarantees from Nichols and Properzi that this second machine will operate at the guaranteed minimum specification rate of 14,000 pounds of rod per hour.

Very truly yours,

ESSEX WIRE CORPORATION
Wire and Cable Division

me Clark

Tomes C. Dunston

Vice President and General Manager

JCD:ds

Cat S.p.A. Continues Milano, Italy

Comparison of Canalco, Alcoa & Amax Proposals Signed by T. L. Seifert Dated October 27, 1967

## Plaintiff's P-97 in evid-CANALCO, ALCOA, & AMAX PROPOSALS

5 E

The following sets forth a comparative summary of the cost, capital expenditures and other relevant factors involved in obtaining aluminum from: (1) Aluminum Company of America (Alcoa) and Western Aluminum No Liability (Wanl); (2) American Metal Climax (Amax); or Consolidated Aluminum Company (Conalco).

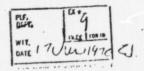
There are some basic differences between the three agreemen's. The Amax arrangement involves a direct purchase of aluminum; whereas, the arrangement with Alcoa and Wanl involves the purchase of alumina from Wanl and the tolling of this alumina by Alcoa. Wanl is 51% owned subsidiary of Alcoa of Australia which in turn is 100% owned subsidiary of Alcoa. The arrangement with Conalco involved a joint investment between Conalco and Essex in a pot line to be located close to the Paducah plant from which pot line Essex would obtain aluminum.

The favorable price obtained from Alcoa-Wanl is possible only because of the nature of the arrangement; a sale and toll arrangement as opposed to a direct sale. Wanl is an Australian company operating solely in Australia and is not subject to the U.S. Robinson-Patman Act; therefore, it can legally sell to different customers at different prices. Australia has no law comparable to the U.S. Robinson-Patman Act. The Robinson-Patman Act would prevent Alcoa, a U.S. company operating in the U.S., from selling aluminum to Essex at a more favorable price, than it sells to other companies. However, the Robinson-Patman Act does not prevent Alcoa from providing a service(of tolling into aluminum alumina which is owned by Essex)at a favorable price, and it does not prevent Essex from receiving tolled aluminum at a total price (for alumina and tolling) more favorable than that which Alcoa can offer in a direct sale of aluminum,

The Amax arrangement provides for the leasing of an Essex-owned Properzzi continuous caster to Amax (for a nominal rental fee of \$10) for use by Amax in providing Properzzi rod for Essex. In contrast, the Alcoa agreement contemplates that Essex will operate its own Properzzi at an Essex-owned plant site directly adjacent to the Alcoa potlines at its Warrick, Indiana plant.

The Alcoa agreement begins January 1, 1968 and is for a fifteen year period which may be extended at Essex's option for an additional 5 years. The Wanl agreement is coterminous with the Alcoa Agreement. The Amax agreement is for a period of seven years and there is no right to extend the terms. No time period was supplied for the Conalco proposal.

The Alcoa Agreement provides that Alcoa will supply 33, 400,000 (+ or - 15%) pounds of Aluminum during the year 1968 and a minimum of 50,000,000 pounds per year (+ or - 15%) thereafter. Alcoa also agrees to provide up to three additional blocks of aluminum each of which will provide Essex with 25,000,000 pounds of aluminum per year (+ or - 15%). Thus Essex, by exercising its options, can obtain 125,000,000 pounds of aluminum per year (+ or - 15%) from Alcoa. The Wanl agreement will provide sufficient alumina in order for Alcoa to provide sud.



In comparison, Amax agrees to supply a minimum of 15,000,000 pounds and a maximum of 18,000,000 pounds during 1967. During the years 1968-1973 Amax agrees to supply a minimum of 18,000,000 pounds and a maximum of 25,000,000 per calendar year. The Conalco proposal contemplates that Essex will take 600,000,000 pounds over a ten year period.

The Alcoa Agreement provides that of the total aluminum delivered to Essex per year 45% will be 99.75% minimum grade (this grade will make 62% conductivity metal), 80% will be 99.60 minimum grade, and 100% will be 99.50 minimum grade. The Wanl Agreement will provide alumina of such quality for Alcoa to meet these percentages. In comparison, the Amax Agreement states that Amax will provide Electrical conductor "62% conductivity when demanded." Under the Conalco arrangement, Essex and Conalco would be responsible for the quality of aluminum produced.

The Wanl-Alcoa arrangement contemplates that Alcoa will toll Essex's alumina into E.C. Grade Redraw, Extrusion Billet, until Essex has facilities to make such rod and billet at which time Alcoa will toll Essex alumina into molten alumina for further tolling by Essex. In contrast, the Amax agreement is for the purchase of E.C. Grade redraw rod only.

The Conalco proposal contemplates that Essex will toll the molten metal it receives from its potline to meet its needs as they exist from time to time.

The Alcoa and Warl arrangements each provide for escalation or de-escalation of the costs and prices to be paid by Essex in the event that the cost indices mentioned in each agreement rise or decline. The index used in the Warl agreement is based on the costs of operating the Kwinana, Australia Reduction Plant for the period July 1, 1969 - Dec. 31, 1969. The indices used in the Alcoa contract with respect to the production charge (the 10¢ charge) are the Labor Index for Alcoa's Warrick Plant (base period July 1 - Dec. 31, 1967)& the Wholesale Price Index (& published by the Dept. of Labor - Base Period July 1, 1967 - Dec. 31, 1967). The index used in the Alcoa contract with respect to the Demand Charge (the 5¢ charge) is the Engineering News Record Construction Cost - 20 Cities Average Index (Base Period July 1 - December 31, 1967).

Both the Wanl and Alcoa agreements contain limitations on the price and cost which Essex must pay notwithstanding a rise in the indices. The Alcoa agreements state that the total charges to be paid to Alcoa for tolling shall not exceed 65% of the price of unalloyed primary aluminum ingot, 50 pound size, 99.5% minimum grade as it may exist from time. For example, the present price is 25¢ for such ingot. 65% of 25¢ equals 16.5¢. Therefore, if the primary price did not change, the maximum Essex would have to pay for tolling is 16.5¢ per pound notwithstanding a rise in Alcoa's costs and a rise in the other indices. As is exhibited in the chart set forth in Exhibit A attached hereto, and assuming a delivered price to Warrick

of alumina at 6¢ a pound, the Primary Metal price would have to drop to 17¢ before it would be cheaper to purchase aluminum elsewhere. The last time the primary price was this low was during 1950 as is shown on Exhibit B attached hereto. This analysis, of course, assumes that other metal would only be obtainable at the Primary price published in the American Metal Market, which assumption, under present day circumstances, is unrealistic as metal is available at a much lower price than published.

The Wanl agreement provides for an absolute ceiling of \$70 a ton for alumina notwithstanding any rise in Wanl's costs.

In comparison the Amax contract provides for no escalation for cost reasons but does provide that the price is based on a 24.5¢ primary metal price and that the price will vary directly with a rise or decline in the primary metal price as published in the American Metal Market. For example, since the contract was written, the primary price has risen 1/2¢ to 25¢ a pound. Thus Essex' price was increased by 1/2¢ a pound.

A discussion of escalation and de-escalation and of limits thereon with respect to the Canalco proposal is inapplicable in that the proposal does not contemplate tolling by an outside company but by Essex itself (in conjunction with Conalco). The limitation on costs in this arrangement will be Essex's ability to keep costs low.

The following page contains an itemized cost comparison of the three proposals. The summary indicates both total investment figures and a per pound cost to Essex under each of the three proposals: (Figures prepared by William DelaCerta and Richard Publow)

			8E
••.	AMAX 1/	ALCOA 2/	CONALCO 3/
Investment Requirements:			ron 000
Land & Improvements	0	50,000	500,000
Buildings 4/	0	200,000	4,670,000
Equipment 5/	1,300,000	1,376,000	14, 130, 000
Total Investment . Dala.	1,300,000	1,626,000	19, 300, 000
1968 Interim Costs Per Pound of Aluminum			
Hot Metal	.2	.218740	•
Depreciation	.002400	0 = /	0
Toll Charges (Rods _ dillets)	0	.023549 =/	0
Freight to Paducah	.014800	.002625	. 0
1968 Total Interim Costs per Pound	260800	.244914	
Costs Beyond 1968 For 10 yr. Period Per			
Pound		61	0
Alumina (per 1 lb. of Aluminum)	0	.049890 6/	0
Freight on Alumina	0	.0183639/	0
Toll Charge - Conversion to Aluminum	0	.15000 2/	
Freight to Casting Mill (Essex Trucks)	0	.000487	٠
Metal before Potline Depreciation	. 0	0	.175800
Potline Depreciation (20 yr basis at		0	.015000
60,000,000 lbs. a year)	0 .	0	.009000
Interest	0	.218740	. 199800
Cost of Hot Mc al at Casting Mill	. 243600	.210740	
Rolling & Casting Costs:			
Operating Costs	0	.016671	.016671
Depreciation on Building & Equipment	.002400	.001329	.001875
	.014800	.002625	.002625
Freight to Paducah	. 260800	.239355	. 220971
Total Cost Beyond 1968 for Rod Av. Et	. 20000	THE PARTY NAMED IN COLUMN	-

1/ Contract presently in effect for 18,000,000 pounds a year. Based on Proposed Contract and Essex 10 year consumption of 891,700,000 of Aluminum.

Pased on Proposal dated December 2, 1966 on basis of Essex consumption of 600,000,000 pounds over a ten year period.

2 miding life 33 years straight line depreciation.

A:nax and Alcoa equipment on a 12 year life. Conalco equipment depreciates over 20 year period for potline ar cost 12,830,000 and casting equipment on 12 year life at 1, 300,000.

Subject to Cost Escalation but limited by 70 a ton price.

Subject to Cost Escalation but limited by fact that cart exceed 65% of primary metal

#### Conclusion

Obviously, the Canalco Agreement provides a better per pound price, than Alcoa or Amax; however it also comtemplates a substantially greater capital investment on the part of Essex. (\$19,300,000 as opposed to \$1,300,000 and \$1,626,000). The Alcoa and Amax arrangements require somewhat similar capital investments; however, the Alcoa Agreement provides a better cost per pound.

Attached are copies of the latest drafts of the WANL and Alcoa Agreements. Also attached is a copy of the Amax agreement and the Properzi lease.

T. L. Seifert

10-27-67

#### EXHIBIT "A"

### 10 E

Primary Price	Limit on Essex Toll Price	Assuming Delivered Essex Alumina Price of:	Total Essex Price
30	19.50	•	25.50
29.5	19.18	6	25.18
29	18.85	6	24.85
28.5	18.53	6	24.53
20	18.20	6	24.20
27.5	17.88	. 6 ,	23.88
27	17.55	6	23.55
26.5	17.23	6	23.23
26	16.90	6	22.90
25.5	16.58	. 6	22.58
25	16.25	6	22.25
24.5	15.93	6	21.93
24	15.60	6 .	21.60
23.5	15.28	6	21.28
23	14.96	6	20.96
22.5	14.63	6	20.63
22	14.30	6	20.30
21.5	13.98	6	19.98
21	13.65	6	19.65
20.5	13.33	6 .	19.33
20	13.05	6	19.05
19.5	12.68	6	18.68
16	12.35	. 6	18.35
18.5	12.03	6	18.03
18	11.70	6	17.70
17.5	11.38	6	17.38
17	11.05	6	17.05
16.5	10.73	6	16.73
16	10.40	6	16.40
15.5	10.08	6	16.08
15.5	9.75	6	15.75
13	7.10	2018-401-301-304-401-30-401-301-301-301-301-301-301-301-301-301-3	

#### UNALLOYED INGOT - (PIG) - SCHEDULE PRICE

	99%					
Schedule	Minimum					
Effective	Average	99.75%	99.87	99.85%	99.9%	99.99%
Filective	Average	37.73%	- >>	77.074		
December 5, 1942(1)	.140	.145	.150	.160	.240	-
December 15, 1946	.140	-	.145	.150	. 240	-
December 26, 1947	.140	-	.145	.150	.160	-
June 28, 1948	.150	-	.155	.160	.170	•
October 11, 1948	.160		.165	.170	.180	•
Hay 22, 1950	.165	. •	.170	.175	.185	-
September 25, 1950	.180	-	,185	.190	. 200	•
August 4, 1952	190	-	.195	.200	.210	-
January 23, 1953	.195	-	.200	.205	.215	•
July 15, 1953	.200	-	.205	.210	. 220	-
August 5, 1954	.205	-	.210	.215	-	-
January 13, 1955	.215	٠.	.220	.225	-	-
August 1, 1955	.225	-	.230	.235	-	-
March 29, 1956	.240	•	.245	.250		•
August 10, 1956	.250	•	.255	. 260	-	-
	99.50%	99.80%	99.85%	99.90%	99.95%	99.99%
	Mininum	Minimum	Minimum	Minirum	Minimum	Minimua
August 1, 1957	. 260	. 265	. 270	.280		- '
April 1, 1958	.240	. 245	.250	.260	-	
August 1, 1958	.247	.252	.257	. 267	-	-
December 17, 1959	.260	.265	.270	.280	-	-
April 12, 1961	.260	.265	.270	.280	.382	.455
September 25, 1961	.240	. 245	.250	.260	. 362	.435
December 3, 1962	.225	.230	.235	. 245	. 347	.420
October 2, 1963	.230	.235	.240	. 250	.352	.425
March 5, 1964	.235	.240	.245	.255	. 357	.430
June 15, 1964	.240	.245	. 250	.260	.362	.435
November 19, 1964	.245	250	.255	.265	. 367	.440
May 28, 1965	. 245	.250	.255	.265		.400
November 8, 1965(2)	.250	. 255	. 260	.270	-	.405
November 12, 1965e	.245	.250	. 255	. 265	-	.400
January 13, 1957	.250	.255	.250	.270	-	.405

<sup>(1)</sup> Prior to this date there was no schedule price.

<sup>(2)</sup> No shipments were made based on this schedule.

Letter from James C. Dunstan to T. D. Kaufmann Re Properzi Acceptance and Costs, Blind Carbon Copy to W. R. Funk and C. V. Kilburn Dated January 22, 1968 ESSEX. Area - Integration of Suntail
becs: W. R. Funk - Ft. Wayne
C. V. Kilburn - Marion

January 22, 1968

Mr. T. D. Kaufmann Amox Aluminum Company 35 Mason Street Greenwich, Connecticut 06831

Dear Tom:

Since in our meeting on January 13 we did not settle any of our specific problems, I thought it best to put in writing our feelings on Properzi acceptance and on costs.

We have reviewed the "conditions for acceptance of Properzi equipment" as outlined in your memo of January 8, 1968, and which was the subject of discussion as our meeting in Bellingham January 9. We find there is partial agreement on some of the points, but on some issues we must take exception. Our proposed revision to acceptance conditions would be as follows.

The Properzi will be considered operating normal beyond the original run in period and become the operating responsibility of Amax when:

- A. The Properzi has operated for two weeks at an average production of 90% of the rated 14,000 lbs. per operating hour on the original first trained shift.
- 375 pro #/wh 8. The Proparzi has produced in the two weeks mentioned in "A" above at least 750,000 lbs. of acceptable redraw rod.
  - C. The Properzi production craw size has been stabilized at no more than six people per shift while the machine is in operation.
  - D. The items relating to equipment details questioned by the intalco operating people have been discussed with the various maintenance and operating supervision and decisions arrived at for satisfactory

course of action. In regard to state parts, we have ordered the original group of states for the mill as recommended by Proporzi, amounting to \$75,403,00. In addition, we have ordered electrical apares amounting to \$7228.00 and parts for the lubrication system amounting to \$3656.00, as recommended by Proporzi. We feel that as for as costs are concerned, this would be the extent of Essex responsibility for spares and Amax would return like value of parts at the end of the contract. For information purposes, C. V. Kilburn will pursue more accurate maintenance data for Type 8 Properzi and will revise the list when better information is available.

In answer to the sheet submitted to Essox outlining the 10 weeks costs of \$57,026.24 incurred during the ten weeks ending December 31, 1967, we submit the following.

- We realize that retrospective estimates were made on direct labor, but will accept the \$7,444.98. In addition, we will accept the \$3,866.30 for Direct Supervision and the other payrolls cost of \$1,470.66 relating to the above payrolls.
- We will accept the \$5,397.50, \$1,340.36 and \$348.20 billed for supply items and related taxes.
- 3. The maintenance labor cost seems prohibitive and even exceeds the total direct labor costs (direct labor \$7,444 maintenance labor \$9,009). Besides this fact, the language in the contract leaves in doubt the responsibility for the maintenance costs during the "running in period." In order to expedite agreement, we will split the questionable cost and pay \$5,026.00.
- 4. The above represents acceptance of \$25,894.00.
- We cannot agree in principle with any of the "Indirect Costs" except that for "Estimated Utilities" of \$500.00
- 6. We are already paying for two (2) Intalco direct supervisors plus 1-1/2 from Essex to supervise only 6 direct labor people; this should preclude additional charges for other supervision. Therefore, the \$1,878.95 for indirect supervision is not acceptable.
- Fixed costs should be limited to a reasonable charge for rental of the facilities and services used by Essex.

The fixed costs of \$220,000.00 for a ton-week period were for the cost house and the new addition. It appears that Essex was assigned the fixed cost for the entire new addition, 44,976 sq. ft., whereas the Properzi occupies 13,696 sq. ft. These costs should be prorated an actual usage. On this basis Essex would owe approximately 30% of the \$19,950.00 or about \$5,985.00. The \$5,985.00 would be an acceptable amount to cover this category.

- General cast house maintenance has been allocated on basis of ratio
  of 55,000,000 lbs. capacity of Properzi to 365,000,000 lbs. capacity
  of cast house. We would be willing to pay on basis of our contract
  quantity of 15,000,000 to 18,000,000 or approximately one-third
  listed amount \$3,777.98), which is \$1,359.00.
- 9. Adding all of the above, Essex charge for the 10 weeks should be:

Direct costs \$25,894 Indirect costs 7,844 \$33,738

An invoice covering the period through December 31, 1967, for \$33,738.00 will be honored immediately. If you wish further clarification of our calculations, please have your accounting people contact W. R. Funk at Essex-Fort Wayne, or for technical matters C. V. Kilburn at Essex-Marian.

We enjoyed discussing your proposal on a reduction plant and will contact you when Paul has a free date to visit the site.

Sincerely,

ESSEX WIRE CORPORATION
Wire and Cable Division

James C. Dunstan Vice President and General Manager

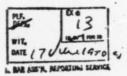
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Letter from T. D. Kaufmann to James C. Dunstan Re Problems in Starting Up Properzi, Copy to Loyer and Arrouet Dated February 8, 1968 PLATHIMP.

1213/

February 8, 1968

Mr. James C. Dunstan Essex Wire Company 2601 South Adams Marion, Indiana 46953



Dear Jim:

I hope you are as worried as we are about the continued lack of progress in starting up the Properzi. Production in recent weeks averages only a fraction of what you and we thought the machines could squeeze out prior to the installation of the coiler. I am confused from reports I have gotten whether the problem continues to be a series of little ones or if there is somewhing fundamentally wrong with the wheel. In either case is there anything we can do to help keep pressure on Nichols Wire to focus on this rather than on other problems before them. Note that the anniversary date of when this facility was to be operating is fast approaching. Also, is there anything our traffic people can do to help expedite the voyage of the coiler which seems to be travelling across the United States at ox team speed?

As to the conditions of acceptance of the Properzi, we can accept A, B, & C as you redefine them in your letter of January 22, 1968. Your proposal on spare parts under D seems to be reasonable but I would prefer to wait until the people at Intalco have gone over the complete list per the procedure we had set up in B ellingham at our earlier meeting before I give final agreement.

In answer to your various particles of the sten-week period prior to the end of the year attached is a clear memo written by Dennis Arrouet of this office. The major item of difference between your calculation and ours seems to be in the allocation of fixed costs in your item 7. You indicate Essex would prefer to have this element of cost allocated on a space rather than a value basis. As explained in the attached memo the allocation on a space basis would cost you more than the value basis chosen by Intalco. The other differences of view are relatively small and could be earned back quickly if and when the Proporzi works.

I hope we can come to some agreement on these costs so that we can send you the January bill with less fuss and feathers. When will you be in New York next?

Sincerely.

TDK:ph CC: J. Loyer, D. Arrouet, T. D. Kaufmann

Letter from James C. Dunstan to T. D. Kaufmann Dated March 5, 1968 Re Charges to Paducah

19E

March 5, 1968

Mr. T. D. Kaufinenn AMAX Aluminum Company 35 Meson Street Greenwich, Connecticut 06831

Dear Tom:

You have recontly submitted your charges to Paducah revised in accordance with our phone conversation. The one exception is the fixed costs of \$19,950 where we still have to obtain proper accounting data.

I think the best solution to the problem is to send out and of our accountants to review this item. In the meantime, I will recommend payment of the other items.

For your information, there was no good breakdown of the maintenance charges and I have had Charlia Kilbum on at least five accessions ask for current information on a weekly basis of the charges. This has been promised but never delivered. It appears to me we could stop all this correspondence and conversation by getting the charges current and approved by Kilburn at the time of the charge or at least within a week of the charge.

Please call me when you get this letter so that we can arrange to send our accountant to Bellingham to review the fixed costs.

Paul O'Malley is still interested in going to Newfoundland to review the site of the reduction mill. Can you pick a couple of dates that would be convenient to you or your people so that Paul could make a selection of a date when he could make this trip.

Sincerely yours,

ESSEX WIRE CORPORATION
Wire and Cable Division

James C. Dunstan Vice President and General Manager

JCD:ds

Letter from Herbert C. Clough to James Dunstan Re Status of Account with Amax Dated June 25, 1968 AMAX Aluminum Co. Amm flo P

P-18

A OMBÍCH OF

35 MASON STREET, GREENWICH, CONN. 08831 - (203) 861-5305

June 25, 1968

Mr. James Dunstan, Vice President Essex Wire Corporation 2601 South Adams Marion, Indiana 46953

Dear Jims

According to our Accounting Department the enclosed statement represents the status of your account with us as at June 21, 1968. This statement indicates that while we have billed you \$660,000, you have only paid us approximately \$208,000.

I note that under the terms of our agreements any controversies or claims arising between us shall be settled by arbitration and unless we receive prompt payment from you in respect to our outstanding uncollected amounts, we will be forced to formally request arbitration in this matter.

PLF.

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DATE (7)

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Sincerely yours,

Herbert C. Clough, Vice President

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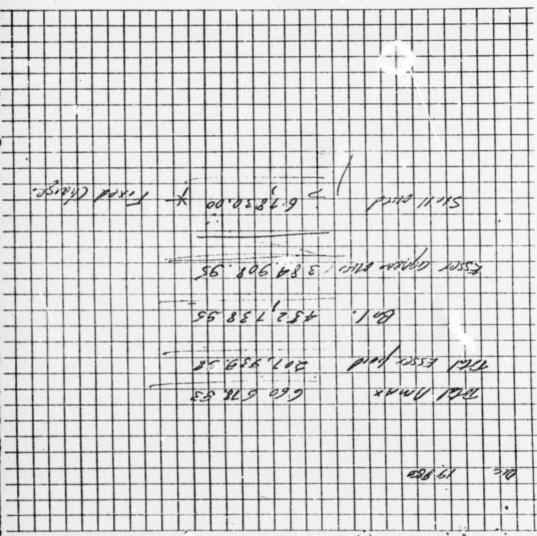
#### HENRY A. PETTER SUPPLY CO.

23 E

PADUCAH, KENTUCKY 42001

PHONE 443-244 (9 TRUNK LINES) - CALVERT, BENTON 362-4691 - METROPOLIS 2351

1014TTPEWRITER NO. 802-891-7448





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Letter from James C. Dunstan to Herbert C. Clough Re Final Billings Dated July 5, 1968

July 5, 1968 427,898,55 384,008.95 39,000,00 × 424,898,95 Herbert C. Clough. Vice President Amax Aluminum Co. 35 Mason Street Greenwich, Conn. 06831 Dear Herb: In answer to your letter, we have just received your final billings. Our analysis is as follows: \$660,678.93 Total Amax Billing \$207,939.98 A39990> Essex Paid \$452,738.95 Balance Of the \$452,738 95, it appears that \$384,908.95 has basis in fact, but the \$67,830.00 of fixed charges have never been resolved to our satisfaction. My recommendation would be for you to check the four figures total billing, amount Essex paid, balance due and the fixed charge of \$67,830. After you have confirmed these figures, I would like to have one last meeting to see if we can reach a compromise on \$67,830 in fixed charges. If this were resolved, Essex would pay immediately the adjusted balance due. If this can not be resolved, it appears that arbitration would be the next step. T. Se feet Please get check and Sincerely yours. ESSEX WIRE CORPORATION Wire and Cable Division mail as find sellened James C. Dunstan against produces of aluminin Vice President and General Manager

form Amax

In lean to

A 424.898.95

Letter from Herbert C. Clough to James Dunstan Re Properzi Operation, Blind Carbon Copy to Kalil Dated July 22, 1968 A DIVISION OF

38 MASON STREET, GREENWICH, CONN. 05831 - (203) 561-5305

N

July 22, 1968

Mr. James Dunstan Vice President Essex Wire Corporation 2601 South Adams Marion, Indiana 46953

RE: Properzi Operation

#### Dear Jim:

I have your letter of July 5th suggesting that we "... have one last meeting to see if we can reach a compromise on \$67,830.00 in fixed charges" which are included in our billings to Essex.

I do recognize that you have previously raised a question on certain elements of the "fixed charges" and agree that we should get together in an attempt to resolve them.

I will continue to try to locate you by phone in an attempt to set up a mutually satisfactory for this purpose.

Sincerely yours,

Herbert C. Clough Vice President

#### HCC: lgj

P.S. Jim, after dictating this letter I have reached you by phone re a meeting. I have a reservation to arrive in Detroit on American, Flight #251 at 3:10 P.M., the afternoon of Monday, July 29th, and to depart again at 6:30 P.M. for Youngstown. We ought to be able to get together at the airport and resolve our problems within that period. Of course, if you get into New York next Thursday, we can get this all out of the way then.

Letter from Thomas L. Seifert to Herbert C. Clough Enclosing Check for \$424,898.95 Re Settlement Dated July 26, 1968



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29 E

# ESSEX WIRE CORPORATION . 1601 WALL STREET . FORT WAYNE, IND. 46804

July 26, 1968

Mr. Herbert C. Clough American Metal Climax, Inc. 1270 Avenue of the Americas New York, New York

(1

Dear Mr. Clough:

Pursuant to our agreement reached Thursday, July 25, 1968, enclosed please find Essex's check for \$424,898.95 in full settlement of all disputes arising from the Bailment Lease Agreement and the Purchase and Sale Agreement, both dated December 14, 1966, been Essex and Amax.

PIL.
DATE 17 LA (970 d)
BAR ASS'N REPORTING SERVICE

Very truly yours,

ESSEX WIRE CORPORATION

Momas Leifest

encl.

Thomas L. Seifert

Halil says Sort Legerait elech Farley concurs 8/23/68.

> Okech giver to Sec'y office for safeheeping 10/31/88.

VOUCHER NUMBER

A JTHORIZEE SIGNATURE

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ESSEX WIRE CORPORATION 19304 FORT WAYNE, INDIANA DISCOUNT NET **BNYOICE** AMOUNT PANOICE Final settlement of all disputes arising from Ballment Lease Agreement and Purchase and Sale Agreement dated Docember 14, 1946, between Essex Wire Corporation and American Metal Clima, Inc. 7/29 424,898.95 DETACH BEFORE DEFOSITING CHECK ESSEX WIRE CORPORATION 71.27 CHECK NO. FORT WATNE, IND. 37178 July 29, 1968 LINCOLN NATIONAL BANK & TRUST COMPANY FORT WAYNE, INDIANA \$ 424,898.95 4年424898A0095CA TO THE OTDER OF ESSEX WIRE CORPORATION - American Metal Climax, Inc. 1270 Avenue of the Americas

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. New York, New York

Negotiation of this check constitutes final settlement of all disputes arising from Bailment Lease Agreement and Purchase and Sale Agreement both dated December 14, 1966, between Essex Wire Corporation and American Metal Climax, Inc.

...

Letter from James M. Morris to James Dunstan Re Assignment of Nichols Personnel to Assist in Meeting Operation Specifications for Properzi No. 8 Equipment Dated May 2, 1968

Citt Ext #190, 5/5/10 mg th

MICHOLS ALUMINUM

33E D-197

May 2, 1968 P-24

ce J defent

Mr. James Dunstan, Vice President Essex Wire Corporation 2601 South Adams Street Marion, Indiana 46953

Dear Mr. Dunstan:

As you requested, I am submitting to you the following contractual arrangement to cover the assignment of Nichols personnel to assist you in meeting your operational specifications for the Properzi No. 8 equipment at INTALCO at Ferndale, Washington.

We hereby offer to assign four of our experienced Properzi operating personnel on the basis of two to a shift, plus our Mr. Paul Raiford, to enable you to meet the following specifications:

- (a) Produce EC-H14 aluminum 3/8" redraw rod to Aluminum Association specifications at the rate of 12,600 pounds per hour while operating. An operating hour begins when rod reaches the coiler and ends when rod is no longer being coiled.
- (b) Produce 750,000 pounds of the above rod in a two-week period.

It is our understanding, after discussion with your representative, Mr. Kilburn, and the INTALCO and AMAX people that our metallurgical concern will be solely with the temper of the above rod as the conductivity and chemistry will be among you, AMAX and INTALCO.

We estimate that the time required to enable you to meet the above specifications will be a period of up to four weeks, provided you supply us with adequate metal, mechanical and electrical maintenance, and both supervisory and hourly personnel; and we will expect no compensation for continuation of the services of our employees beyond such period unless we have mutually agreed to the terms of such extension.

34 E May 2, 1968

Essex Wire Corporation

- 2 -

The cost to you will be \$200.00 per day per Nichols employee plus reimbursement of costs of round-trip transportation between Davenport, Iowa, and Ferndale, Washington. Accordingly, we request that you advance to us \$2500.00 for this round-trip transportation and pay us as promptly as cossible after the close of each week the compensation of \$200.00 per day per employee.

If for any reason we should fail in our effort to enable you to meet the specifications within the four-week period, we will refund to you all of such payments of \$200.00 per day per employee received by us and neither of us will thereafter have any further obligation to the other under this agreement.

If the above is acceptable to you, please so indicate by signing and returning to us the extra copy of this letter enclosed.

Sincerely yours,

NICHOLS ALUMINUM COMPANY

James M. Morris
President

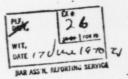
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ESS	EX WIRE CORPORATION
By:	
	Vice-President

Letter from J. M. Morris to James C. Dunstan Re Releases of Claims Arising Out of Properzi No. 8 Equipment and OTT Coiler Dated June 25, 1968



#### NICHOLS ALUMINUM

Mr. James C. Dunstan
Vice President and General Manager
Essex Wire Corporation
2601 South Adams
Marion, Indiana 46953



Dear Mr. Dunstan:

After talking with our Board, and particularly in view of your irrevocable lefters of credit posted in Italy and France, we feel you would be wise to offer complete and unconditional releases of any claims arising out of the Properzi No. 8 equipment and the OTT coiler against the three companies (Continuus, O. T. T. and Nichols) in return for the cancellation by Continuus and OTT of the two pending orders covered by the letters of credit and the repayment to Essex of its downpayments on each machine as soon as each machine is placed elsewhere.

We would recommend such an offer to the two principals.

Yours sincerely,

IMM:srb

Letter from James C. Dunstan Dated May 10, 1968 to Stephen Furbacher Re Properzi Bailment Lease Agreement and Aluminum Purchase Agreement Dated December 14, 1966 PEF.

BAN ASS'N RUVERING

MAY 10, 1968

REGISTERED MAIL

American Metal Climax, Inc. 1270 Avenue of the Americas New York, New York

Attention: Mr. Stephen Furbacher, Vice President

Re: Project Ballment Lease Agreement and Aiuminum Furchase Agreement Dated Dec. mber 14, 966

#### Gentlemen:

Essex Wire Corporation hereby tenders notice that, jursuant to the last sentence of paragraph 3 of the Ballment Lease Agreement dated December 14, 1966, between Essex Wire Corporation and American Metal Climax, Inc., the Properzi continuous caster and related equipment has failed, after repeated attempts to fix the machinery, to live up to its specifications and that Essex will thus promptly remove the Properzi and related machinery and restore the site.

The manufacturer's specifications for the Properzi continuous caster guaranteed that the Properzi would produce 14,000 pounds of aluminum rod per hour. From November 1967, when the Properzi began; roducing rod, to May 1, 1968, the Properzi has; roduced an average of only 1,831 pounds of rod per production hour. In fact, when the Properzi was operating at its best it produced 76,600 pounds in a seven hour period (on April 1, 1968) which averaged only 12,000 per hour. Essex has spent \$87,763 and incurred the loss of more than a thousand man-hours in making an ali-out effort to get the Properzi operating at full capacity. Essex has given the Properzi more than an adequate trial period and will not spend any additional time or monles to rectify this impossible situation.

Consequently, Essex has instructed Mr. Charles V. Kilburn, Essex reject Engineer, to go immediately to the Intaico Aluminum Corporation plant

American Metal Glimax, Inc. May 10, 1968 Page 2

at Bellingham, Washington, and to begin removal of its Properzi continuous caster and related equipment.

The Purchase and Sale Agreement between Essex and Amax dated December 14, 966 is premised upon the existence of this Properzi; therefore, of course, removal of the Properzi will also terminate this Agreement.

Very truly yours,

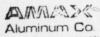
ESSEX WIRE CORPORATION Wire & Cable Division

James C. Dunstan

Vice President and General Manager

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Letter from Stephen A. Furbacher Dated May 17, 1968 to James C. Dunstan Re Properzi Bailment Lease Agreement and Aluminum Purchase Agreement Dated December 14, 1966 (Registered Letter)



41 E

A DIVIGION OF

88 MAUON BTREET, GHI I NWICH, CONN. 08031 - (203) 661 5:105

REGISTERED

May 17, 1968

Essex Wire Corporation 1601 Wall Street Fort Wayne, Indiana 46804

Attention: Mr. James C. Dunstan,

Vice President and General Manager

Re: Properzi Bullment Leane Agreement and Aluminum Purchase Agreement dated December 14, 1966.

Gentlemen:

Your letter of May 10, 1968 has been received. We do not agree with the views and position stated in that letter.

It has not been established that the Properzi Continuous Caster and related equipment has failed "to live up to specifications". To the contrary, Nichols Aluminum Company, the agents in the United States for the manufacturer, have assured both Essex Wire Corporation and American Metal Climax, Inc., both orally and in writing, that they can, within a relatively brief period put the Properzi and all related machinery in such condition that it will meet the specifications and perform satisfactorily. Nichols has evaluated the situation within the past several weeks at the express request of Essex Wire.

Furthermore, Essex Wire does not have, under the last sentence of paragraph 3 of the Bailment Lease Agreement dated December 14, 1966, the right to unilaterally decide that the Properzi has failed and does not have the right under the circumstances to remove the Properzi or related machinery from its present site at the Intalco plant without the agreement of American Metal Climax, Inc.

Essex Wire has not fulfilled its contractual obligation to complete the installation and start-up of the Properzi and related machinery. American Metal Climax, Inc. hereby requests that Essex Wire perform its contractual obligation.

The Purchase and Sale Agreement of December 14, 1966 cannot be unilaterally disavowed by Essex. The right of Amax to suspend its obligation until the Properzi facilities are operating normally cannot be used by Essex to evade its contractual commitment.

We shall be glad to meet with you to discuss these matters. We expect that you will perform your contractual obligations referred to above.

Yours very truly,

AMERICAN METAL CLIMAX, INC.

a. Furbacker Stephen A. Furbacher Vice President

Letter from James C. Dunstan Dated May 24, 1968 to Stephen A. Furbacher Re Properzi Bailment Lease Agreement and Purchase Agreement Dated December 14, 1966 bcc: P. W. O'Malley
T. L. Seifert

44E 166 P-33

May 24, 1968

Registered Mail

American Metal Climax, Inc. 1270 Avenue of the Americas New York, New York

Attention: Mr. Stephen A. Furbacher Vice President

> Ro: Properzi Bailment Locio Agreement and Aluminum Furchase Agreement, detail December 14, 1966

#### Gentlemen:

Your latter of May 17, 1958, has been received and Essex hereby advises you that you are in error with respect to several major matters.

FIRST: Nichols has not assured Essex that Nichols can make the Properzi meet specifications. Nichols has merely offered to make, at a cost of \$16,000 to Essex, a trial to reach a rate of 12,600 pounds per hour in contrest to the 14,000 pounds per hour specification rate as established by both Nichols and Properzi. Nichols has not made any assurances that the Properzi could even produce at the 12,600 pounds per hour rate.

SECONDLY: The Properzi has simply failed to live up to its specification of 14,000 pounds per hour. Arrax can verify this failure to live up to specifications simply by checking the production records at the inteleo plant at Ferndale, Washington. Once it has been established, as it has, that the Properzi has failed to live up to specifications, after repeated good faith attempts to do so, Essex does have the right to remove the Properzi and restore this site.

THIRD: Essex has fulfilled its contractual obligations. Essex was required under the contract to make a good faith effort to get the Properti operating at the specification

American Metal Climax, Inc. Page Two May 24, 1968

rate. Essex fulfilled this obligation when it invested \$87,763 and incurred the loss of over 1000 man hours in making changes in the casting wheal, spouts and other equipment in an attempt to get the Properzi to operate at the specification rate. Nothing more can be required of Essex in this respect.

FOURTH: The Purchase and Sale Agreement, dated December 14, 1966, is promised upon the delivery of aluminum rod from the Properzi operating in conformance with the Bailment Lease. Because the Properzi has failed to operate at said specification rate, the Purchase and Sale Agreement has no basis.

Therefore, pursuant to the decision which Essex communicated to Amox in its latter dated May 10, 1968, Essex hereby informs you that Charles Kilbum has obtained a construction crow to remove the Properzi and related equipment and to restore the site. Mr. Kilburn and the construction arew will begin removal on Monday, June 3, 1968.

Very truly yours,

ESSEX WIRE CORPORATION
Wire and Cable Division

James C. Dunstan

Vice Fresident and Ceneral Monager

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JCD:ds

Registered Letter from Furbacher to Essex Wire Corporation Dated May 29, 1968 Re Properzi Bailment Lease Agreement and Aluminum Purchase Agreement Dated 12/14/66

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Aluminum Co.

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A DIVIBION OF

SE MASON STREET, DRI ENWICH, DONN DOEST - (203) 861-5305

May 29, 1968

#### REGISTEFED MAIL

Essex Wire Corporation Wire & Cable Division 2601 South Adams Marion, Indiana 46953

> RE: Properzi Bailment Lease Agreement and Aluminum Purchase Agreement, dated December 14, 1966

#### Gentlemen:

We have received your letter dated May 24, 1968. We hereby notify you again that you are in breach of the Bailment Lease Agreement and that your refusal to perform your contractual commitments will result in very substantial damage and injury to American Metal Climax, Inc. Not only does Amax have the Aluminum Purchase Agreement dated December 14, 1966 with Essex, it also has, as was contemplated in the December 14, 1966 agreements and as you have long been notified, other contractual commitments for the sale of redraw products the performance of which will be interfered with by your refusal to perform and removal of the Properzi equipment.

Your statements in your letters of May 10, and 24, 1968 are incorrect inter alia as to the agreed per hour specification rate being 14,000 lbs., as to the Properzi equipment having failed and as to Essex having fulfilled its contractual obligations to Amax.

Amax will hold Essex responsible for its loss of profits, its damages from being forced to acquire redraw under other arrangements in order to fulfill its commitments and all other loss and damage resulting from Essex not performing both the Bailment Lease Agreement and the Aluminum Purchase Agreement dated December 14, 1966.

Essex Wire Corporation Page Two May 29, 1968

Essex has no right to remove the Properzi and Amax will hold Essex responsible for the consequences of such removal and the refusal of Essex to put the Properzi into operation promptly.

We inform you again that we will be glad to meet with you and discuss the situation.

Very truly yours,

AMERICAN METAL CLIMAX, INC.

Stephen A. Furbacher Vice President

SAF: 1gj

Exhibit P-48
Warehouse Inventory, Shipping Records and Memoranda

# 50EP- 48

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### JAN R. PRODUCTION - SHIPPIN RECORD 56E

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SHIPPED PELON 1/1-193, 815

in. 3 - 750 P mill motor to Seallle for repair Jan 7 - Mill morter returned and re-instelled on 11 - Insuformer bushings received, installed of Power on Jan 15-20 Casting three-out week but throuber with sport, shew-pine, workedward production\_ un 22-27 Trouble with rod breakage in mill all week, experimented with mill adjustments and adjusting amulian and casting cooling. Jan 29 - Fet-3 - dello above Feb 5 - Feb 10 - detto above Feb 12 - 21 465 lbs 1. 13 35 115 lbs 14 13 735 Rfs 11 15 52 255 Me Feb 16 27.975 the trained farmeces and shul down for coilers instellation March 4 Coiler installation complete and ready for March 7 Made first coils ar loilers in afternoon 2 coils - 4610 lls Mish 8 7 coils - 20 920 lbs Some adjustment stell being made on coclers.

59 E Time spent at Intalco after 4/20/67 161 april - 20-21 may 1-11. aug 29 - Sept 15 Tept 19 - Oct. 19 Dec 17 - Dec 22 1968 Jan 8 - Jan 18 Jan 29 - mrs. 20 mu 24 - May 3 May 20 - May 25 Check and and stutup began 10-23-67 They 17-68 Final Shul down 12/1/17 11/27/67 -2/11/68 -2/16/68 -4/12/08 4/10/68 -4/20/65 -4/ 30/68 10/23/07 -11/8/67 J. Annel 2/12/68 2/6/65 10/24/07 4 Italian

206 - 733-400 60E

1/11
2:30 Whiel good

5 minutes - Porce epont - Juge off

metal spill alle over

1/10 Rem in AM

11 minutes - 2160 th at 1.7 RPM

PSI 17 000

7 minutes mi second basket - break

7 minutes mi second basket - shut

alown belt shut

1/21 Rem 2:45 hrs without break

Marinite box bottom fell out

12 coils approx 2302 lb each

for 22 coils approx 980°F

PSI - high

Jan 10 (West) Bushings for transformer arrived in late afternoon. Held Over over to mitell bushings and rergize tramformie . jun. 11 Vower back on in a. M. Encountered throable with sport floor control and finally found diodes "shot" in control circuit. Repairer by 1:00 PM. Checked out mill motor. Couldn't get it itested it list fut found only because blower not on. motor seemed ox after starting. Started easting mill. Rot enlever backet ox but within a few and have feeling heat loss in too great. Jun 12 Slaved casting at 9:40 A. and put in mill. Encountered several breaks as mill infected of to The mill stopped. Could find no reason for stopping other than someone pushed stop button. Decided ... to lover emulsion before restarting in hope of eliminating breaks. Shut som approx 11:00 AM. Started again after lunch. Encountered electrical thouble - Conveyor stops when mellic started. Short down at 1:30 P.M. Intended to stirl again at 2:300 but me of experienced men had been burned by the rod and sount home. Hed two new men in sure so did mit have enrugh exioneste holf to run again. Cleaned up serry and just it book one fumere to finish out day . Choken

15 (mm) Soil clarker lete because of difficulty and to joing formace. Il 10:00 is the broad to just seeing in mill but had twist. In account try with the Carl but make the short out side of with the Carl Castry and Charact the Started carting in mill again at 10:30 and non until now before break in not. Lift going however, and non without throuble until faithing time. However, and some without throuble until faithing time. However, and seems of wheel slower to 1.5 RPM because afout legan to plug up. On-section - Offers 40 orolls.

Jan 16 Started up and stuck caving in milt by 9:00 AM.

Had me break ofter about 600 lbs but then nam

good until 1:15 when #17 fin sheared. Shat

liver because maintenance thought we had had

bearing or stand. However inspection provide

bearing ork, but too late for restart today

Production - approve 30 000 lbs. Encountered

slow down of sport flow again today. Plan to

Change Casting wheel tonight and put, #1

re-mashined or heel back m.

Jan. 17 Ready to go at 8:30 but sport flow control not functioning right. Checker it out and started earling at 91:15. Weld started freezing around flow for - shut down at 9:30. Restricted at 10:15 A. Had some bad easting and not bruke but started rolling again at 11:20. I left for cost meeting at 3:00 P. Had produced 27000 lbs at that time. Seft meeting and returned to

KILBURN 3/15 Rom 58000 lbs in 5 hrs 40 min. - all equipment 5k. 3/16 Sat. - Put side oprays on Ring noll to give side cooling 3/18 Found #1 furnace from up with temp at 1220: affectilly some me had opened formace door and not should down tight again and formace went on love fire at 4:00 ? M Sanday and works down all night. Date formare who it wasn't checked between that hime and 8:001 M. Wer, days. Moreley 2 Guerrace OK and Professi ready four start up by 8:30 AM. However, had broade removing topping flux and dedn't get metal flow until 8:15 AM water and it of some make without noticely it. Casting lided freeze - mollen mell out exit sed our eastful wheel stopped. More mell out exit sed our eastful wheel stopped. More mell offilled, Casting stuck to thet and ruined belt. Sheet down to claim up and the other at the object of the sed of the sed of the order of the 11:08 Trungly Stick in mill 12:10 Stop 2:39 - Fee run out of 1 furnace noticedy A lo 20 min running took 11 Furnace up to temps at 4:35 after making argustament on metallungy ( silvan up to 08 so had to lette from for 2:1 ration of grow. Had to stop and and sure age to beforting on reel. Finally of fort by he and shut allow at 5:00 sport but wand shut alm at COK. Pub gut it 8:30 AM Onding mill 8: 40 AM Had fed section in casing after 2000 tts, so end pasking out a starter ind mill at 9:00A (10 minute down time). Ben green with some stow down of about there. Rock out stout

the afraction but on the end france of \$2 wiles was the afraction of the wile and france of \$2 wiles was free with the middle and free with the middle of the sound of the second france of the second france of the second france of the second po When the peratum was what do well 2:30 Pro: 3/4 

Martin carling at 1:50 and last of despet good excell for a fam breaks. Can find formare out.
When sometaked to second formare, shaller getting, memorare breaks, but supt spiration, would straft of the first too great and had to glay off formare it 2:45

Parthelin - 38 0 95 lbs. -

Starte casting at 8:28 and stude in mill at 8:40 nice me small soil but casting tapt breaking in mill so shall down at 1:10. Restarted at 10:45 and man word first furnace. When tried to switch furnace . broke is made off play and so had to stop. Had considerable number of breaks in rod and produced only small coils. Production 18, 440 lbs.

3/22 Started Casting at 10:20 and casting Reft breaking in mill although counting broken forther, good. Started at 03:30 again will good broken conting but still broke in mill, so should drawn at 3:20.

actile 2 draws of bowener after shitting drawn.

3/25 Starter Casting at 9:20 and put in mill at 9:40. Had few broken but settled drawn. Change furnices at 11:20 and arange at 2:15. Pen which at 2:5 8 P.M.

11:20 and again at 2:15. Raw wheel at 2.5 RPM. and had to rot out spout at 3:45 because what had slower to 2 RPM. Turned over mill to 2 md shift

Local shift started at 4:00 in operation. Porder nit april sit 5:40. Changer furname at 5:45. Casting looked good but stated breaking immediately Roller sport and 3 more times: First 3 coils were approx 3000 lbs. and affer that breaks, occurred every 400 - 500 les. manager to make a few civil over 1000 lbs. Shat down at 9:00 because oxilation in sport. Production - 35 715 lbs

above Period I was at marin and this report corper from log book. On Fred, the I talked to C.K. Le and advid him to add Lovemen is who smulsing. The samploms inducted the combine was parsing the breezewaye in the mill. The results on 3/25 fore

66 E I were time and that the trange motor was full of mater and it was police it has sent to clicke shot of material and was to be see to for replacement at 400 PM. for the execut shoft of horizoned, when the motor was principality it did not seen and further Ekick descended are open field. This should have been checked but rowned. as a herall the word shift and mot ferale eighter and the morter was felled and sent into Bellingham for repair . - no Production The Lange to the fell seming this meter extensive as find believed, so the inster was returned by 10:000 11 toly. Alloy of 13 has clopsed by on it was no running order.
The net delay coursed by this look of grot some was 14 days.
Creenthing and need to start at 11:30 balls fee was to shot one as falloge.
Third start 1 2:00 PM - Lind drawn at 1:00 PM. I was out to lunch and do not house is not problem, but it was righted to have consistent large warks in easting. and rejected break in mill because or three in mothing to do but should have and thech out adjustments seemed start 3:00 PM. - some result - but which one open from the wheel solation. Examination to one open on the wheel solation. Examination of the wheel six not videoate rangeling soring but the wheel six not videoate rangeling soring but While was no question of the bad spot occurring a and decide to fut in on old wheel that is through to have no new whele in hand with the sew type arrive money siend shift will change the what. seems shift but it to produced bad costing the ite anspected crack in what no Production taday Ones are not are intented months; we were to 3/25 try the the and pertagonal mole Property sont will the organic estupment. This mortial changes the bottom holl in the #1 stand. Raiha then take I the spice #1 aligh and thin we could switch

with some to gether with Elange wheels, were with completed until 7:30 Pm the second whist. The second whist there got in operation at 8:00 PM and now mutil 4:50 Am. - Production 79850 lbs. 3/29 Blotted Cartine at 8:55 after the in bell stucke.

Cesting in mill at 9:05 numming at 2:5 KFM what speed.

Red its beep showing what is no become of spout

4:25 - 2.4, 15:00 - 2.3, 10:15-2.2, 11:00 - 2.1

11:45 - 2.0. at 12:50 plugger of former because 11:45-2.0. at 12:50 player of former because desting from what and chicking. Frank will had collapsed considerable. Worked on 3 bad. spris in wheel. Production 3 3 5 75

Sicond whift starter casting at 410 but easting
was grathing what as bad would not get straight
enough easting to put in mill and after 2 allempto
had to play off furnice and shuft form. Decided
only alternative was to sharpe to re-machines mole that was on hand but believed of little value because so much stock had been taken from it. I would shift fimiled change over of which and mill for realising monday a. m. An Saturday are asked 30 extra spray norghes (15 cook side) to side well cooking in preparation for new typ. Shirled casting at 6:55 and stock casting in mill about 9:05. Ran all shift without trouble at 25 RPAI Production 76 600 th 7 his. Head trouble off and on rest of shift. Producion 25565 finally decided to send old pentagonal what in to Wellist for in aching that it bick an seemed white the but die not get recoming. All seady for running in A M. Production for day 6705.

4/3 Mailie Casting of 4:00 but had opide in mild surface and had to be to me because of crarks in casting, it is a again at 10:20. Had more breaks and had the place forms as at 11:05. Starter again at 11:30

to play furns a at 11:05. Starter again at 1:30

# INTALCO ALUMINUM CORPORATION INTER-OFFICE MEMORANDUM

C. Filburn &

TO I. R. Macdonald

DATE

December 11, 1967

FROM C. K. LI

COPY TO

J. L. Loyer

UBJECT Progress Report on Properzi Machine

R. Ferrie P. Thaure J. Wiegand

This is a summarized report for the last five weeks. From this date on, there will be a weekly report due in every Tuesday until the time that such report is deemed no more necessary.

# A. New Equipments Installed and/or Farts Modified

Due to the excessive angle between the axis of the casting wheel and the axis of rolling mill, fan type rollers were added to the caster and a pole attached to the conveyor to bend the casting back and forth for alignment.

Pressing roller and side rollers were added infront of the water quenching box.

A stationary jib crane is installed to hang the coils upward for fork lift boom handling.

The marinite box and metal flow control system built by Hunter was disgarded. Stationary insulated trough with ceramic spout and stainless steel float with screen is in use. This ensures clean metal supply and at the same time greatly reduces the maintenance cost.

### B. Operation

We started the casting wheel on November 5. The first two weeks, while the Italian engineers were here, were spent on testing out the machines. The main trouble in this period was the marinite box and the flow control device.

The third week we got into belt and spout problems. The belt we used then was 0.031" - 0.034". They were not strong enough and started to get wavy edges after a short period of running. At the same time, the expansion deformation had caused a bevel formed on the rim of the copper wheel, which in turn left thin wings on the castings. The spout and the controlling pins we were using were made of ordinary steel. Life was averaging about two hours.

The casting we made so far had too high tensile strength. We tried to cut down the emulsion in the mill but no significant change in tensile strength was found. It was not until Mr. Paul Raiford's vist (Nov. 27 to Dec. 1) that this problem was solved. By raising the emulsion temperature and cut the quantity way down, we brought the tensile strength down to 17,000 - 19,000 pai which is acceptable by Essax Area.

69 E

Thicker Belt, 0.075", were put into usc.

The fourth week was a bad week. The mill was plugged up from #2 stand to #17 stand on Konday. It took us 3 days to clean 1 out.

Then on Thursday we had a leak in the cast iron tundish at the start.

Friday was spent on putting up another tundish and finished up other modifications.

On December 11 we had the best run so far. We used the only spout we have and with a graphite controlling pin, we made a sever run, wife a production rate of about 2000 fee far

### C. Production

We have shipped one car offinished rods, 70,928 pounds, to Essex Wire. Conductivity ranging from 60.4% to 63.4%, Tensile Strength 18,182 psi to 23,753 psi.

We had sent 3 duplicate samples to Essex Wire for tensile strength test, their analysis results are 19,000, 19,800 and 19,200 psi, while our analysis were 21,021, 21,007 and 21,789 psi.

### D. Manning

we are running on one shift with a crew of six men. Two casting machine operators, one furnace operator and three helpers. The crew takes turn to lunch. The basketting and banding operations tie up at least 3 men. The situation should be improved when the coiler is installed. On supervision side, there are James Wiegand, Assisting General Foreman, and myself. One Vaintenance Mechanic and Electrician on call when needed.

21

# INTALCO ALUMINUM CORPORATION INTER-OFFICE MEMORANDUM

I. R. Macdonald

o. Production

DATE

The control of the co December 11, 1967

C. K. 14 COPY TO

SUBJECT

R. . e

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We had sent 3 duplicate samples to Essex Wire for tensile strength test, their analysis results are 19,000, 19,800 and 19,200 psi, while our analysis were 21,021, 21,007 and 21,789 psi.

## D. Manning

We are running on one shift with a crew of six men. Two casting machine operators, one furnace operator and three helpers. The crew takes turn to lunch. The basketting and banding operations tie up at least 3 men. The situation should be improved when the coiler is installed. On supervision side, there are James Wiegand, Assisting General Foreman, and myself. One Maintenance Mechanic and Electrician on call when needed.

# INTALCO ALUMINUM CORPORATION INTER-OFFICE MEMORANDUM

TO I. R. Macdonald

FROM C. K. Is UT

SUBJECT Progress Report on Properzi Machine

DATE December 18, 1967

COPY TO J. L. Loyer

R. Ferrie P. Thaure

R. A. Gustafson

J. Wiegand

### B. Operation

On Monday, we ran for 7 hours with the ceramic spout. Stopped only because shift time ran out.

Tuesday we broke the ceramic spout when we put it in. So we used stainless spout instead. The machine ran for four nours then suddenly the casting got stuck in the fil? stand, eventually all the preceding stands were plugged up. We lost production for the rest of the week.

After we tore apart the #17 stand and examined the piece of jarmed rol, we believe the breakdown is due to the improper setting of the entry roller guides in the #17 stand. The rod protruded into the clearance space 'etween the two opposite guides and formed a fin which in turns hindered the movement of the rod.

There is no plus gage for the entry guides, so we will use the rolled section from the last stand as the gage afterward.

Toward the end of Tuesday's run, the finished rod started to show three edges equally spaced on the periphery of the rod. This usually shows either we had put too large a reduction on the #17 stand or there had been a bad alignment the rod is twisting while rolling. We'll study this problem with Charles Kilburn when he comes back next week.

We also found periodic deformations on the copper casting wheel. The side walls concaved inward and the bottom convexed up in locations about one inch in front of each cross bracing of the wheel frame. We believed this is caused by the blocking off of spraying water by these bracings resulting a hot spot on the copper wheel. We checked this problem with Nichols Aluminum and was informed that all three existing #3 machines have the same problem.

About the tundish, because of the limiting space in between the controlling pin and its sliding guard which is hooked up on the side of the tundish, a refractory limit tundish can not fit in unless the whole flow control device is remodified. Right now we are going to try to line the existing tundish with fiberfrax paper and investigating the use of cast steel tundish.

#### c. PRODUCTION

We shipped the second car load 60,080 lbs of rods to Essex Mires on December 14. Conductivity ranging 60.9 to 62.63 of Cu, with one coil of 59.3%. Tensile strength from 16,831 to 21,336 psi. The rods made in this week had tensile strength ranging from 16,531 to 19,005 psi.

# D. MANNIE

There is no change except one casting operator was made leadman. This is due to the fact that Jin Wiegand will be Acting Cast House General Foreman while T. Agesen is on vacation.

Oxli

# MTALCO ALUMINUM CORPORATION

TO I. R. Fa ionald

DATE December 18, 1967

FROM C. K. IA

COPY TO J. L. Loyer

SUBJECT Progress Report on Properzi. Machine

R. Ferrie P. Thaure R. A. Gustafson J. Wiegand

### B. Operation

On Honday, we ran for 7 hours with the ceramic spout. Stopped only because shift time ran out.

Tuesday we broke the ceramic spout when we put it in. So we used stainless spout instead. The machine ran for four hours then suddenly the casting got atuck in the #17 stand, eventually all the preceding stands were plugged up. We lost production for the rest of the week.

After we tore apart the #17 stand and examined the piece of jammed rod, we believe the breakdown is due to the improper setting of the entry roller guides in the #12 stand. The rod protruded into the clearence space between the two opposite guides and formed a fin which in turns hindered the movement of the rod.

There is no plug gage for the entry guides, so we will use the rolled section from the last stand as the gage afterward.

Toward the end of Tresday's run, the finished rod started to show three edges equally spaced on the periphery of the rod. This usually shows either we had put too large a reduction on the #17 stand or there had been a bad alignment the rod is twisting while rolling. We'll study this problem with Charles Kilburn when he comes back next week.

We also found periodic deformations on the copper casting wheel. The side walls concaved inward and the bottom convexed up in locations about one inch in front of each cross bracing of the wheel frame. We believed this is caused by the blocking off of spraying water by these bracings resulting a hot spot on the copper wheel. We checked this problem with Nichols Aluminum and was informed that all three existing #8 machines have the same problem.

About the tundish, because of the limiting space in between the controlling pin and its sliding guard which is hooked up on the side of the tundish, a refractory lined tundish can not fit in unless the whole flow control device is remodified. So ght now we are going to try to line the existing tundish with fiberfrax paper and investigating the use of cast steel tundish.

## C. PRODUCTION

We shipped the second car load 60,080 lbs of rods to Exxex Mires on December 14. Conductivity ranging 60.9 to 62.6% of Cu, with one coil of 59.3%. Tensile strength from 16,831 to 21,336 psi. The rods made in this week had tensile strength ranging from 16,531 to 19,005 psi.

#### D. KANNING

There is no change except one casting operator was made leadman. This is due to the fact that Jin Megand will be Acting Cast House General Foreman while T. Agesen is on vacation.

TOY PARINITE WIRE & CABLE CO., MARION, IND.

ATTN\ MR. CHARLES KILBURN

SUBJY PROPERZI OPERATION

WE DID NOT RUN ON 12/8/67 DUE TO PUTTING NEW TUNDAGE IN AND REVAMPING MANCO SHEARS.

WE RAN SEVEN HOURS ON 12/11/67. WE USED CERAMIC SPOUT AND CARBON
PIN. WE MADE 23 COILS APPROX. TOTAL WEIGHT 53,000 LBS. WE
ARE CHANGING BELT FOR RUN ON 12/12/67.

ANALYSIS OF ROD MADE 61.8 TO 62.5 CONDUCTIVITY. 17,889 TO 19,005 TENSILE STRENGTH.

ON 12/12/67 WE RAN FOUR HOURS. WE USED STAINLESS STEEL SPOUT
AND CARBON PIN. WE MADE 12 COILS APPROX. TOTAL WEIGHT 29,000 LBS.
NO ANALYSIS ON ROD YET.

AFTER FOUR HOURS OF RUNNING THE MILL JAMMED. TRYING TO DETERMINE THE REASON NOW.

WILL BE DOWN APPROX. TWO DAYS ON MILL .

JIM WIEGAND
INTALCO FNDL
12/13/67
END

19

ves

FROMY INTALCO FNDI

TOY PARANITE WIRE AND CABLE, MARIN, IND.

ATTN\ MR. CHARLES KILBURN

SUBJY PROPERZI OPERATION

WE TALKED TO JIM RUSSELL AND HE SAID OUR TUNDAGE FROM ITALY WON'T BE IN FOR 2 TO 3 WEEKS. WE ARE CONSIDERING AIR FREIGHTING ONE IN.

WE WOULD APPRECIATE A TELEPHONE CALL.

WED WE DIDN'T RUN ON 12/13/67 AND WILL NOT RUN ON 12/14/67. WE

JIM VIEGAND
INTALCO FNDL
12/14/67
END\9
ESSEXWIREANH

# INTALCO ALUMINUM CORPORATION INTER-OFFICE MEMORANDUM

TO I. R. Macdonald

CK & FROM C. K. LA

SUBJECT Progress Report on Properzi Machine Week ending 12/24/67

DATE December 26, 1967

COPY TO J. L. Loyer

R. Ferrie

P. Thaure

R. A. Gustafson T. D. Kaufmann

J. Wiegand

C. Kilburn

### B. OPERATION

We made three runs on Monday.

Shortly after the start of the first run, the joint between the short and long trough sections opened up and molten metal poured out from the gap. • We had to plug the firmace. The operator tried to rock the tundish to adjust the position of the spout. While he overdid it, the trough was pushed to one side and caused the spill.

The second run was interrupted by the sudden breakage of the ceramic spout.

We used stainless steel spout for the third run. It frooze off after 10 minutes run. Reason was not clear. We were using fiterfrax paper lined tundish. We were suspecting some small piece of loosened fiberfrax paper may cause the trouble. But we were not sure.

Tuesday we had a scheduled shut down to let Bechtel shift the power supply to mew transformer.

When we came in on cold Wednesday morning, both the lube oil and emulsion temperature was way too low. We reset the lube temperature limiting switch and started the mill slowly to heat up the lube. We connected all the spare heaters available to heat up the emulsion. Because the emulsion temperature came up too slow, at 10:00 am we decided to start the run and use the casting to heat up the emulsion. By noon, after several expected rod breakage, we were able to get a full unbroken coil. Then we got another breakage, and har trouble with the rod conveyor.

The risk we took proved to be not worth while. The time consumed in handling scrap rods are costly, and we were only lucky that no damage was made.

We started again after lunch. Just w. n the tundish was filled up, the flow control pin rheostat quit to function, which gave us a whole tundish full of molten metal to dump.

The rheostat, which we checked before we started, was eramined and decided it was too weak structurally for this purpose. A new one will be ordered.

30

At 9:00 AM Thursday morning, just before we started to unplug the furnace, an explosion occurred in the electric room. Some piece of wire was found grounded. The main switch and a small 600 volt transformer was sent out for repair.

# C. PRODUCTION

The production for this week was the coils made on Wednesday morning. We shipped the third car load, 52,810 lbs out on December 18.

## D. HANNING

Crew size remained unchanged. We transferred part of our crew to work for Cast House while the machine was down.

# INTALCO ALUMINUM CORPORATION

P. O. BOX 937 FERNDALE, WASHINGTON AREA CODE 206

December 28, 1967

Mr. J. B. Russell, Chief Metallurgical Engineer Nichols Aluminum 1725 Rockingham Road Davenport, Iowa 52808

Dear Jim:

I can not get, hold of you by phone because you are on vacation.

After all these breakdowns, we are getting anxious on spare parts. Charles Kilburn has shown me three lists. He told me all the items on preliminary list for Casting Machine (dated 1-10-67) and preliminary list on Rolling Kill (dated 1-10-67) were on order. But no items on spare parts for lube station (your letter Aug. 4, 1967) were on order yet. Do these three lists cover all the necessary items that we need? As you know, we do not have enough operating experience to make a good judgement. If not, please advise us as soon as possible.

Our maintenence people are asking me about drawings which show the part numbers. Better still, a book which has the part numbers and item descriptions. Charles is on vacation, would you give me information so that we can make up a complete list for ordering and reordering?

On electrical parts, Charles mentioned that he is still waiting for the recommended list from the Italian. Would you do something to expediate it? In the meantime, I have asked our electrical maintenance people to make up a tentative list by ourselves. I do not know if it will be any good.

Sincerely yours

end

C. K. Li Assistant to Cast House Superintendant

cc Ian Macdonald Charles Kilburn

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## CORPORATION INTALCO ALUMINUM

INTER-OFFICE MEMORANDUM

#1159

TO I. R. Macdonald DATE December 31, 1957

FROM C. K. Li

COPY TO J. Loyer, R. Ferrie, P. Thaure, R. A. Gustafson, J. Wiegand, T. D. Kaufmann, S. A. Furbacher, C. Kilburn

Progress Report on Properzi Machine w/e 12/31/67 SUBJECT

> The machine has been down all week as a result of the control panel accident that occurred during the previous week.

We got the main switch and the small transformer back on Tuesday. Then we discovered one of the bushings on the primary side of the Italian power supply transformer was broken. At the same time, the 750 HP mill motor was found to have a very low resistance to ground.

Our electrical maintenance people are drying out the big motor in place. The circuit of the ventilating fan will be rewired so that it will not keep blowing cold air while the motor is not running as originally planned. Strip heaters will also be added.

Replacement bushing is being ordered from Italy through Nichols Aluminum. It is due to arrive in the first week of January.

CKL/dp

INTALCO ALUMINUM CORPORATION

INTER-OFFICE MEMORANDUM

#25

TO L. R. Macdonald

DATE January 9, 1968

FROM C. K. Li

COM IO J. Loyer, R. Ferrie, P. Thaure R. A. Gustafson, J. Wiegand, T. D. Kaufmann, S. A. Furbacher, C. Kilburn

SUBJECT Progress report on Properzi Machine w/e 1/7/68

The 750 HP Mill motor was sent down to Westinghouse's shop in Seattle Wednesday, January 3rd, for repair. It was back and reinstalled on January 7th (Sunday).

The transformer bushing which was supposed to be here last week did not arrive.

The Essex Wire plant has drawn some of our 3/8" rod. The results were satisfactory. Following are the data transmitted to us by C. Kilburn:

Coil Number		T.S. (psi)	Cond. (% Cu)	
P-32-6	Top	16, 475	63	
	Bottom	16, 923	62	

The chemical analysis by our Lab gave Si: 0.06 and Fe: 0.16. The above figures for T.S. and Cond. show some deviation from our own measurements.

CKL/dp



INTALCO ALUMINUM CORPORATION

INTER-OFFICE MEMORANDUM

#62

TO I. R. Macdonald

FROM C. K. Li

DATE January 17, 1968

COPY TO J. Loyer, R. Ferrie, P. Thaur R. A. Gustafson, T. D. Kaufmann, S. A. Furbacher, C. Kilburn

SUBJECT Progress Report on Properzi Machine W/E 1/14/68

Power was restored on January 11th (Thursday afternoon). After 15 minutes of operation, the ceramic spout froze up.

We made two runs on Friday. The casting ran well all day, but we had trouble with the speed synchronizing between the casting wheel, the conveyor and the mill. The few coils made are not long enough to ship.

Electricians later found the cause of the problem, and the synchronization adjustment will be made on Monday when the rolling mill is back in operation.

CKL/dp

FROM INTALCO FADL

84 E

TON ESSEX WIRE CORP., MARION, INDIANA

ATTN CHARLES KILBURN - Engry Keeps.

STARTED FROM WEDNESDAY JAN. 17, AFTERNOON WE DID NOT PRODUCE ANY ROD, BREAKAGE IN MILL. ROD LOOKED DRY. FIRST WE THOUGHT BECAUSE OF THE MAKE UP WATER WE ADDED INTO THE EMULSION. WE LOOSENED IT SEVERAL TIMES. EMULSION CONCENTRATION WAS 11\ MONDAY, 10\ TUESDAY, 10\ WEDNESDAY, 9\ THURSDAY MORNING AND 10\ AFTERNOON AFTER LOOSENING ALL BY OLD ANALYSIS METHOD. IT WAS 9.38\ THIS MORNING BY CENTRIFUGAL METHOD. THE LAST RUN THIS AFTERNOON COBBLED THE MILL FROM NO. 9 TO NO. 17 STAND. RODS CAME OUT FROM MILL DID NOT LOOK DRY AS BEFORE. WE TOOK APART NO. 9 STAND FIRST, FOUND BUILD UPS ON ROLL SURFACE AND FINE CRACKS ON ONE OF THE ROLLS. WE ARE GOING TO CLEAN UP THE REST IN THE WEEK END AND WILL WIRE YOU AGAIN IF WE FOUND MORE THINGS. IF WE HAVE TROUBLE AGAIN NEXT MONDAY, WILL CONSIDER ASKING NICHOLS PEOPLE TO COME UP.

C. K. LI 1/19/68 INTALCO FNDL St. 8203 Rm.



# INTALCO ALUMINUM CORPORATION

INTER-OFFICE MEMORANDUM

16

TO I. R. Macdonald

DATE

January 30, 1968

FROM J. Wlegand for C.K. LI

COPY TO

S.A. Furbacher, T. D. Kaufmann, C. Kilburn

FROM

PROGRESS REPORT ON PROPERZI MACHINE FOR W/E 1/21/68

J. Loyer, R. Ferrie, P. Thaure, R. Gustafson, C.K. Li, T. Agesen

Casting continued through the week although there were a number of minor stoppages. Almost all stoppages were due to mechanical difficulties.

The Properzi was started at 1.8 rpm several times, but could not hold that speed. The machine was slowed to 1.5 rpm.

The ridges on the wire were found to be the result of the rod being pushed rather than rolled through \$17 stand. The condition in \$17 stand is being corrected.

The fourth carload with 21 coils and a total weight of 52,720 pounds was shipped. The rod had the following characteritsics:

	T.S. (ps1)	Conductivity (\$ Cu)
Maximum	17,033	61.3
Minimum	13,827	62.9

JW:mm



FROM

# INTALCO ALUMINUM CORPORATION

INTER-OFFICE MEMORANDUM

TO I. Macdonald

DATE

January 30, 1968

COPY TO

S. A. Furbacher,

T. D. Kauffman, C. Kilburn, J. Loyer,

R. Ferrie, P. Thaure,

R. A. Gustafson, C. K. Li,

37

T. Ageson

J. Wiegand (for C. K. Li)

SUBJECT PROGRESS REPORT ON PROPERZI MAC"INE, W/E 1/28/68

Production dropped this week to 5 coils (11,160 pounds) due to a large number of breaks in the rod. The breaks appeared to be caused by tension. On examining the rod, small holes were found in the center of the rod. The cause seemed to be in #14 stand, but maintenance didn't find anything wrong. The cause of the porosity is still being checked. On Friday, the oil concentration in the emulsion was raised from 9.4%. This will probably cause less breakage.

MA/SW



# NTALCO ALUMINUM CORPORATION "

INTER-OFFICE MEMORANDUM

I. R. Macdonald TO

Jim Wiegand Styl. FROM

Progress Report on Properzi Machine SUBJECT W/E 2/4/68

February 5, 1968 DATE

COPY TO J. L. Loyer, R. Ferrie P. Thaure, R. A. Gustafson C. K. Li, T. A. Agesen S. A. Furbacher,

T. D. Kauffman, C. Kilburn

There was no production this week due to the problem of the casting breaking in the mill.

We adjusted the reduction on #3, #7 and #10 stands this week. We also added 110 gallons of loosner to the emulsion on Mednesday night, which seemed to help. We added another 55 gallons of loosner on Thursday night. We have had some problems with bad casting this week which I believe we have cleared up. We did not run on Friday.

C. Kilburn has been here since Monday afternoon working on the problem with us.



# INTALCO ALUMINUM CORPORATION

INTER-OFFICE MEMORANDUM

I. R. Macdonald TO

4. L. C. K. IA FROM

Progress Report on Properzi Machine 4/E 2/11/68 SUBJECT

February 12, 1958 DATE

COPY TO J. L. Loyer R. Ferrie

P. Thaure

R. A. Gustafson

T. A. Agesen

J. Wiegand

T. D. Kauffman

S. A. Furbacher

C. Kilburn/

Hr. James Pussell of Nichols Aluminum has been here since Feb. 6 and is working on the rod breakar problem.

Adjustments had been made last week on cooling water, belt temperature and emulsion concentration and distribution. We tried to cut down the temperature of the casting before it entered the mill by water spray. It reduced the breakage.

We made a few short coils totalling 7,665 pounds. Part of them has T. S. higher than specification calls for.

The breakage problem is not solved yet. Mr. Paul Raiford of Nichols Aluminum is here to-day.

TO I. R. Macdonald

C. K. L1 FROM

SUBJECT Progress Report on Properzi Machine W/E 2/18/68

DATE February 18, 1968

COPY TO J. L. Loyer

R. Ferrie

P. Thaure

R. A. Gustafson

T. A. Agesen

J. Wiegand

T. D. Kaufmans S. A. Furbacher

C. Kilburn

## A. New Equipments Installed

The OTT coiler arrived on site on feb. 9. Foundation pouring started on Feb. 16. Next Honday we will run one more day in order to drain and clean the furnaces. Then we will be down for about two weeks for the coiler installation.

### B. Operation

The rod breakage problem was pin pointed down to the variation of temperature of the casting before entering the mill. Water spray is then a must to control the casting temperature. The recent practice is to cool this casting temperature down to and keep it at 900° F and adjust the emulsion in the mill to get the desired T. S.

The oxide formed on the casting was another main reason for rod breakage. We found that by putting several adhesive coatings on the ceramic spouts did reduce the oxide formation. It is believed that the ceramic spouts we obtained are too porous and air is being s cked in. We 'ave contacted the manufacturer K&T to investigate for improvement.

Casting speed is running at 2 R.P.M. rolling had to stop periodically between coil change to allow rodding of the casting spout.

Mr. Paul Raiford of Michols Aluminum was here for the whole week. Many improvements are owed to his valuable suggestions.

#### C. Production

Date	Lbs Produced	Conductivity Range	T.S. Range	51%	Fe%
2-12	21,465	60.1 - 62.6	15319-17826	.07	.17
2-13	35,115	60.0 - 62.5	16715-23313	.08	.17
				.06	.12
2-14	13,735	61.9 - 63.4	16493-18502	.06	.13
2-15	52,255	61.0 - 64.2	15915-18476	.07	.16
				.06	.14

2/15 was so far the best day. We continued casting for eight hours. The first portion of run was very good. Later we started getting bad castings. 1 Kilburn

## INTALCO ALUMINUM CORPORATION INTER-OFFICE MEMORANDUM

I. R. Macdonald TC

DATE February 26, 1968

CKL C. K. 14 FROM

COPY TO S. A. Furbacher,

T. D. Kaufmann, C. Kilburn, E. J. L. Loyer, R. Ferrie P. Thaure, R. Gustafson PROGRESS REPORT ON PROPERZI MACHINE FOR W/E 2/25/68 SUBJECT

T. A. Agesen, J. Wiegand

### A. NEW EQUIPMENT INSTALLATION

We drained and cleaned both furnaces. They have been refilled and are ready.

Essex Wire started the coiler installation on February 20.

On our part, we have taken this chance to work on several items, the major

Design and install a side wall spray system for the Nichol's design casting wheel.

Move the trough 3 inches toward north, so that better heat insulation can be provided for the magnetic crutch for the flow control pin.

Check out all mill stands. Polish rolls.

Extend track of Manco Shear.

Rebuilt the press down rollers in front of the water spray box.

Straighten and polish the stainless steel guide rollers on the conveyor. They were scratching the casting.

Fix oil leaks in lube station.

Increase the water level in the casting pit when casting operation is in progress and paint the pit walls. This is for safety precaution.

# B. PRODUCTION

In draining the furnaces, we made 27,975 lbs of rods, with conductivity ranging from 61.2 to 63.25, T.S. ranging from 15,594 psi to 19,349 psi, Si % .05 to .06, Fe % .11 to .13.

# INTALCO ALUMINUM CORPORATION INTER-OFFICE MEMORANDUM

91 E

I. R. Macdonald

March 4, 1968 DATE

C. K. 14 FROM

COPY TO J. L. Loyer R. Ferrie P. Thaure R. Gustafson

Progress Report on Properzi Machine 4/2 3/3/68 SUBJECT

T. A. Agesen
J. Wiegend
T. D. Kaufnann
S. A. Furbacher
C. Kilburn

The installation of the OTT coiler is completed. Checking out will be started on 3-4-68.

10 Ian Facdonald

FROM C.T. IA CAL

BJECT Progress Report for Propersi Machine Week Ending 3/10/68. DATE March 12, 1968

COPY TO J.L. Loger

R. Ferrie

P. Thaure

R. Gustefson

T.A. Ageuen

J. Wiegand T. Kaufmonn

S.A. Furbacher

C. Kilburn -

### A. Hew Equipment Installation

Hr. Robert Flamane of O.T.T. and Hr. John Fox of Michols were here for the starting up of the O.T.T. Coiler. Rod was first coiled on Thursday afternoon 3/7/62. We plugged the furnace off after getting two half size coils for coiler adjustment.

On Friday we made seven (7) coils with the largest being 3,900 Lbs. The main trouble so far is the main sheer.

The casting speed had been raised to 2.3 rpn for a short while, then it gradually slowed down because of the build-up inside the cerasic spout.

### B. Production

Date	Lbs. Produced	Conductivity Range	T.S. Range	Sis	?e%
3/7/68	4,610	61.1 - 62.0	16174 - 17912	.06	.16
3/8/68	20,920	60.6 - 61.1	15091 - 21354	.07	.16

# C. Panning

Hr. Les Bloodel has been assigned as the Properzi Foreman.



# INTLEO ALUMINEN CORPORATION

INTER-OFFICE MEMORANDUM

93E 44

to Ian Pacdonald

FROM 0.1. 14

CAS:

SUBJECT Promers Perent for Preservi Eachine.

DATE 3/18/68

COPY TO 3. Perrie

P. Thatre

T. Agesen

J. Wiegand

T. Kaufman

S.A. Furbacher

B. Chernt'e:

We made two runs on Londay but 45d not succeed in saling a coil. We found but sucts in the costing.

We changed the casting wheel ring gold on Thereby, after the new wheel was on, the electric circuit malfunctioned. It was found late that night that it was caused by some dirt that had accounted on a low voltage contact in the scaled race. An electric energine switch was installed today in place of the sechanical switch on the crossing about of the coller.

On Medicardry we had trouble with the recess sport. Cride on the costing kept breaking the red. We charged the sport and restarted up in in the afternoon and get good costine, but the red still hept breaking in the still. We suspected it was coursely the emulsion concentration drop due to the breaking down of the small recirculating purp we gut in last week. The emulsion concentration ment 7.12% on Webcasday while the recommended range is 7 to 9%.

We found that the cil best on separating out from the exulation. We put on another purp to such the rich cil floating on top of the unfiltered took and blooming the concentration such up to 21%. We had contested the Mobile Co. and they provided to be distinct emulsion expert Fr. Kolarik to see us on 3/19.

Thursday we ran four hours in the remning. We stopped when the belt started to go bad. Then we started again, the new spout we had put on started to give us crites.

Threasity in the coronic spouts has been one of the main troubles we have encount and so we decided to produce to it the spouts before use. The shouldesturer informed us they have developed a new sending material and they expect it will halve the problem. We are soing to ret some of these rediffed apparts have used for trial. The showing down of the chating speed pakes constant changes in the operating conditions.

We are also looking into the possibility of using a fiberinar paper agout.

A rein of also wall water sprays were installed over the vectors. It's is smill for the coning sew soll design. This will be sfully lengthen the life of the existing Property designed colds which defens rapidly and results



# INTA .. CO ALUMINUM CORPORATION

INTER-OFFICE MEMORANDUM

94E "

TO

DATE

COPY TO

FROM

SL" IECT

in hot spots or cracks in the casting.

C. Production

3/1 <sup>h</sup> 54,385 60.7 - 62.7 14,300 - 18,807 .06 3/15 57,655 59.9 - 64.9 13,928 - 19,026 .07	Date 3/14 3/15			T.S. Range 14,390 - 18,897 13,928 - 19,026	.06	.18
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# INTALCO ALUMINUM CORPORATION

INTER-OFFICE MEMORANDUM

95 E

45

to Jan Mastoneld

FROM C.K. IL CKL

SUBJECT

Progress Report on Processi Eachine Week Ending 3/24/58 DATE Harch 25, 1968

COPY IO J.L. Loyer
R. Forrie
P. Theure
R. Custifson
T.A. Agesen
J. Wiegand
T. Kaufmon
S.A. Furbacher
C. Kilburn

### B. COTRACION

On Fonday we had three runs, we stapped the we had water problems, maintenance delay and a broken spout.

Quesday we ran pretty smooth until we modeled the spout. Chide started to form on the conting.

Production started to decline on Mednesday afternion. Judging from the operation today (3/25/62), we can say that it was compact by the tightness of the emulsion. We had Mr. Holarik of Mobil one in on Tuesday. He suggested that we add a half dose (10 gallons) of tightness every day until the free oil percentage goes down. We aided the first 10 gallons on Tuesday might. The effect was so unexpectedly percentage in the free oil percentage down and brought the emulsion percentage right up. We stopped the addition the test day. Butnot until we suffered a great deal of red break ges in the mill, then we started to suspect that the emulsion had become too tight. We added loosever Friday might and odded again today. The relling operation went smoothly today.

We started to use the modified and pressure shocked ceramic spouts. Thursday and the result is very encouraging. The castings are free from oxides and the build-up grows slower.

C. PROD DIME 3/18 3/19	26,825 42,330	60.8 - 62.6 60.0 - 62.4	7.5. R093 15.780 - 19.897 13.561 - 17.998	.06 .03	.14
3/20	32,095	61.7 - 62.5	14,003 - 18,911	.07	.16
3/21	12,440	61.8 - 62.5 61.9 - 63.0	14,885 - 20,058 15,121 - 20,792	.06	.15

E. PANNING
Me shorted operating with two distance For by Borch 25, 1968

# 96 E INTALCO ALUMINUM CORPORATION

INTER-OFFICE MEMORANDUM

April 1, 1968 DATE Ian Macdonald TO J. L. loyer COPY TO o. K. Id ext R. Ferrie FROM P. Thaure R. Gustafson Progress Report on Properzi Machine W/E 3/31/68 T. A. Agesen SUBJECT J. Wiegand L. Bloedel T. Kaufmann

S. A. Furbacher C. Kilburn

A. New Equipment Installation
The last section of neggles on the side wall sprays was put in during the week end.

## 3. Operation

We lost two and half shift production on Tuesday and Mednesday because of water dripped into the conveyor motor from the casting cooling toxes. Toward the end of the week we had troubles with casting whoels. We changed casting wheel three times, including a completely new one of round bottom type which lasted only for one and a half shifts. The mold walls caved in so bad that it grabbed the casting to make it so wavely and could not go through the mill.

We had put on our last usable refurbished wheel. The Nichols new

design wheel is due in this week.

22 mm I. D. ceramic spout was put into use on 4/1.

## C. Preduction

Date 3/25	No Produced	Cond. Range 61.8 - 62.6	T. S. Range 14,259-21,993	.06 .05	.17 .15 .16
3/23	79,850	62.0 - 62.9	13,971-16,745	.05	.13
3/29	33,575	61.8 - 62.5	15,094-17,797	.05	-13



# INTALCO ALUMINUM CORPORATION

INTER-OFFICE MEMORANDUM

to Ian Macdonald

FROM C. K. IA CKE

SUBJECT Progress Report on Properzi Machine W/E 4/7/68

DATE April 8, 1968

COPY TO J. L. Loyer

R. Ferrie

P. Thaure

R. Gustafson T. A. Agesen 11 7

J. Wiegand

L. Bloedel

C. Kilburn

### B. Operation

New Nichols designed wheel mold arrived on 4/3 and installed the same night. On its first use, the walls were deformed due to the high belt pressing roller pressure we were using. This resulted in a wavely and cracked casting. The roller pressure was cut down afterwards.

The main shear of the coiler has been giving us quite a few troubles. It would not shift the rod to the coiler when we wanted it to. One reason we found out was the shaft that turns the switches turned loose. On other times it was malfunction electrically.

On spouts, we got a piece of straight fiber-frax paper tube from Carborundum Co. Me are trying to build up the head end ourself and give it a trial. The ceremic spouts we are using now are better than what we got, but not to a point as trouble free. Oxide formation sometimes still remains to be a problem.

We are selecting pot line ladles according to analysis for charging.

### C. Production

Date	Lbs Produced	Cond. Range	T. S. Rance	S1%	Fe%
4-1	102,165	61.3 - 63.0	13,581-17,517	.05	.1315
4-2	6,305	61.8 - 62.9	14,562-16,378	.06	.15
4-3	52,790	62.2 - 63.6	13,968-16,211	.05	.14
4-4	2,615	62.1 - 62.1	14,552-16,444	.05	.13



# INTALCO ALUMINUM CORPORATION

INTER-OFFICE MEMORANDUM

Ian Macdonald

DATE April 16, 1968

Lee Bloedel FROM

SUBJECT

COPY TO J. Loyer R. Ferrie

P. Thaure

R. Gustafson

T. Agesen

J. Wiegand

C. K. Li

C. Kilburn

B. Operation

For the week ending 4/14/68 we encountered five operational problems. Four of the problems have periodically hampered production for a number of weeks and are as follows:

1. Casting wheel water cooling adjustment.

Progress Report on Properzi Machine W/E 4/14/68

2. Sherr and coiler electrical and mechanical adjustments.

Casting oxidation and casting wheel speed reduction caused by spouts.

Variations in emulsion concentration.

The fifth operational problemwas a cobble in the mill Wednesday morning. The cobble was due to incorrectly positioning the casting into # 1 mill stand.

Mr. Paul Raiford of Nichols Aluminum technically assisted us from April 10 to April 12. Mr. Raiford recommended that we eliminate using the heavy filter paper for the Hydromation unit and use a lighter filter paper. He believes that the use of the heavy filter paper could be the cause of our emulsion problem. Mr. Raiford also recommended the use of a titanium spout. Mr. Raiford suggestions are presently under investigation.

Date	Lbs Produced	Cond. Range	T. S. Range	517.	Fe%
4-8	73,300	61.8 - 62.7	14,945 - 19,522	.05	-12
4-9	10,560	62.2 - 62.3	15,421 - 17,534	.06	.16
4-10	None				
4-11	28,575	61.7 - 62.5	16,712 - 20,758	.07	.15
4-12	48,175	61.1 - 62.8	16,179 - 22,264	.06	.14



# INTALCO ALUMINUM CORPORATION

INTER-OFFICE MEMORANDUM

99 E

#345

10 Ian Macdonald

DATE April 22, 1968

FROM Les Bloedel

COPY IOJ. Loyer, R. Ferrie, P. Thaure, R. A. Gustafson, T. Agesen, J. Wiegand, C. K. Li, C. Kilburn

SUBJECT Properz

Properzi Progress Report for week ending April 21, 1968



#### A. New Equipment Installation

A new pair of side spray manifolds were installed Wednesday. The new side spray manifolds should improve the cooling characteristics of the string wheel.

Tycsday, a new roll of #845 filter paper was installed on the Hydromation unit. The new filter paper should increase the free oil concentration, resulting in improved emulsion properties.

#### B. Operation

A quality casting was produced during the week. The main operational problem was rod breakage in the rolling mill, which was attributed to the emulsion. Mr. Paul Raiford, of Nichols Aluminum, and Mr. Ivan Kolarik, of Mobil Oil, were contacted on possible solutions. Mr. Kolarik recommended that we circulate the unfiltered free oil into the filtered mill emulsion. Mr. Kolarik will visit Intalco on Monday, April 22, for further investigation of the emulsion problem. Twenty barrels of Prosol 48 have been ordered and are due to arrive April 22, in case Mr. Kolarik recommends changing the emulsion.

The latest shipment of 22mm spouts was defective, and the manufacturer was contacted. The company admitted a lack of proper inspection and testing, and has promised to resolve this problem.

A broken shear pin in #17 mill stand caused a cobble that prevented any production Tuesday afternoon and Wednesday.

#### C. Production

Date	Lbs. Produced	Cond. Range	T.S. Range Sig	Fe%
4-15	51,575	61.9 - 62.5	15,713-21,991 .05	.14
4-16	6, 425	61.8 - 62.3	17, 151- 17, 396 . 05	.13
4-17	None			
4-18	21,590	62.1 - 62.6	16, 426-19, 256 . 05	.13
4-19	32,770	61.7 - 62.4	15, 280-19, 075 . 06	.13

LB/dp



## INTALCO ALUMINUM CORPORATION

INTER-OFFICE MEMORANDUM

TO

Ian Macdonald

DATE

May 1, 1968

FROM

Les Bloedel

COPY TO R. Ferrie, P. Thaure, R. Gustafson, T. Ageson, J. Wiegand, C. K. Li, C. Kilburn

SUBJECT

Properzi Program Report for the weekending April 28, 1968

#### Operation

Although many operational problems were encountered this week, one of the main problems was eliminated. Tuesday, a new batch of emulsion was prepared and it has eliminated the rod breakage that was attributed to the rolling mill. In order to maintain the desired emulsion concentration of between 10 - 16%, addition of between 15 - 30 gal. of Prosal 48 will be added daily.

A cobble, Monday afternoon, coupled with the emulsion change Tuesday, prevented any production until Wednesday. The remainder of the week's production was hampered by spout oxidation which caused the rod to break in the rolling mill.

Friday afternoon the mill was shut down because the coiler doors became very difficult to remove. The lead screw for the reel collapsing device had to be removed and machined on both coilers. While the mill was down for coiler repairs the mill stand oil was changed. become contaminated by the emulsion.

A shipment of seven 22 mm and three 25 cm spouts arrived Friday afternoon and will be used the first of next week. The main problem that continues to disrupt production is the spout. What is presently needed is a spout that is free of defects and capable of functioning properly and continuously for 16 hours at speeds ranging from 2.5 - 3.2 r.p.m.

Date	Lbs. Produced	Cond.Range	T.S.Range	SiZ	Fe%
4-22	24,995	61.7 - 62.3	16,063-22,547	.06	.14
4-23	None				
4-24	37,105	61.7 - 62.6	15,651-19,029	.06	.14
4-25	84,250	62.0 - 62.6	17,151-22,686	.06	.14
4-26	40,275	62.1 - 62.4	17,238-21,200	.06	.16

LB/ev



SUBJECT

# INTÁLCO ALUMINU CORPORATION

INTER-OFFICE MEMORANDUM

Ian Macdonald TO

Les Bloedel FROM . ..

> Properzi Progress Report for the week ending May 5, 1968

DATE May 7, 1968 J. Loyer COPY TO R. Ferrie, P. Thaure, R. Gustafson, T. Agesen, J. Wiegand, C. K. Li, C. Kilburn

#### Operation

The ceramic spouts have continued to disrupt production. The shipment of 22 mm spouts received 4-26-68 contained 25 mm by 22 mm and 22 mm by 22 mm tapered spouts. The two 22 mm by 22 mm spouts were satisfactory while the 25 mm by 22 mm spouts produced oxide. Norm Catanzaro and I talked to Jim Ogle of General Cable about their spouts. Mr. Ogle indicated that they have never used the 25 mm by 22 mm spout and was reluctant to talk about their operation. We have cancelled all orders of 25 mm by 22 mm spouts and placed orders for the 22 mm by 22 spout.

A new limit switch for the cropping shear pinch down rolls was installed and has eliminated the wire cobbling in the cropping shear and main shear.

Wednesday, the seals went out on the pressure regulator for the belt press roller and deformed the rims on the casting wheel. A new type of pressure regulator was installed and the sides of the casting wheel were dressed down with a file.

Friday morning the casting cobbled in the rolling mill. The cause was due to a broken shear pin in  $\dot{v}$  16 mill stand. A new vendor for the shear pins is presently under investigation. The present shear pins are made locally and are hard and brittle.

The emulsion concentration has fluctuated from 11.88 - 13.13 and appears to be in excellent condition.

Date	Lbs Produced	Cond. Range	T. S. Range	51%	Fe".
	48,170	61.8 - 62.4	17,514 - 22,212	.06	.15
4-29	57.445	61.7 - 62.6	16,938 - 20,132	.06	.15
5-1	10,510	62.1 - 62.6	17,355 - 19,906	.06	.15
5-2	92,415	61.8 - 62.4	17,169 - 21,561	.06	.16
6 2	2000				



# INTALCO ALUMINUM CORPORATION

INTER-OFFICE MEMORANDUM

102E

TO Ian Hacdonald

DATE May 14, 1968

FROM Les Bloedel

COPY TO J. Loyer, R. Ferrie, P. Thaure, R. Gustafson, T. Agesen, J. Wiegand, C. K. Li, C. Kilburn

SUBJECT

Properzi Progress Report for the week ending May 12, 1968

#### A. New Equipment

Thursday, a new foundation was poured for the coiler monorail crane. The original foundation was inadequate and unsafe. The Drott was used instead of the monorail from Wednesday - Friday.

#### B. Operation

There were six problem areas this week that hindered production. Monday, a cobble in the rolling mill prevented any production until Tuesday. The cobble was believed to have been caused by a combination of poor casting and brittle shear pins.

Tuesday, the rolling mill shutoff without warning on two occasions because the filter differential pressure mercury switch for the mill stand oil tank wasn't set properly. Also, the tapping block for #12 furnace was leaking and was frozen off to prevent additional leaking.

Wednesday, a natural gas outage in the cast house prevented any production on the day shift. Swing shift production was limited to one furnace since #12 furnace was too cold to tap.

Thursday, #12 furnace was drained, cleaned and a new tapping block was installed. Also, the lead screw for #1 coiler was remachined because the door became very difficult to remove.

Friday, the ceramic stouts were the biggest operational problem and have continued to disrupt production for the entire week.

		2-1 2	T. S. Rance	Siz	3c%
Date	Los Froduced	Cont. Rance	- · · · · · ·		
5-6	None	(2.2.62.6	17470-21281	.06	.18
5-7 5-8	37,420 19,205	61.8-62.5	17164-20644	.06	.16
5-9 5-10	40,260 9,800	62.0-62.4 62.2-62.7	18164-20833 17122-19155	.06	.16



### CORPORATION INTALCO ALUMINUM

INTER-OFFICE MEMORANDUM

103E

Ian Macdonald TO

May 21, 1968

Les Bloedel FROM

COPY 10 J. Loyer, R. Ferrie, P. Thaure, R. Gustafson, T. Agesen, J. Wiegand, C. K. Li, C. Kilburn

SUBJECT

Properzi Progress Report for the week ending May 19, 1968

#### A. New Equipment

A new casting wheel was installed Thursday morning. The rims of the old casting wheel were badly worn and deformed. A new cold roll steel belt was installed Tuesday, the belt previously used was made of hot rolled steel.

#### B. Operation

The only operating condition that affected production to any major extent was the ceramic spout. Wednesday, eight starts were aborted because of oxide around the spout. In order to determine the nature and location of the spout leak, a copper tube was placed around the spout and a nitrogen atmosphere introduced. The only conclusion that can be drawn from this experiment was that the spout was not aspirating through the shank of the spout. Therefore it is very likely that the spout is either aspirating through the joint in the head of the spout or through the bond between the spout and the tundish. Three steel spouts were used to determine the possibility of the oxide being caused by another factor. The steel spouts produced a oxide free casting but deteriorated in a matter of minutes.

The Properzi was shut down Friday for an indefinite period of time, pending a decision from Essex wire and AMAX.

Date	Lbs Produced	Cond. Range	T. S. Range	51	Fe
5-13	57,184	61.9 - 62.6	16863-20019	•06	.14
5-14	62,800	61.8 - 62.5	17229-20435	.06	.15
5-15	1,435	62.4 - 62.6	17151-17512	.06	.15
5-16	71,550	61.8 - 62.6	17257 <b>-</b> 19716 18086-19871	.06	.15
5-17	5.485	62.5 - 62.6	10000-13011		

## Exhibit P-54

31 Page Agreement Between Essex Wire Corporation Signed by P. W. O'Malley and Aluminum Company of America Signed by S. J. Simmons, Jr. Dated December 26, 1967

# Plaintiff's P-54m evid. 105E

This Agreement is between Aluminum Company of America,

a Pennsylvania corporation having its principal office in Pittsburgh, Pennsylvania

(Alcoa) and Essex Wire Corporation, a Michigan corporation having its principal

office in Fort Wayne, Indiana (Essex).

Intending to be legally bound, the parties agree as follows:

- 1. As used in this Agreement:
  - (a) "Alumina" means smelting grade alumina owned by .

    Essex, meeting the specifications set forth in paragraph 14 of this Agreement, delivered or, when indicated by the context, to be delivered by Essex to Alcoa for conversion into Aluminum.
  - (b) "Aluminum" means moiten unalloyed aluminum, 99.5% minimum grade.
  - (c) "Warrick Works" means Alcoa's works located near Evansville, Indiana.
- This Agreement covers the toll conversion for Essex by Alcoa of Alumina into Aluminum.
- 3. During the calendar year 1968 Alcoa shall stand ready to produce for Essex from Alumina 22,000,000 pounds of Aluminum, plus or minus 159

106 E

in accordance with and subject to the terms and conditions of this Agreement (Start-Up Block).

- 4. During each of the calendar years 1969 through 1983, Alcoa shall stand ready to produce for Essex from Alumina 50, 000, 000 pounds of Aluminum, pluminus 15%, in accordance with and subject to the terms and conditions of this Agreement (Block A).
- Essex may add Block B, Block C and Block D to this Agreement
   as follows:
  - (a) In addition to Block A, upon receipt of notice from

    Essex at least twelve (12) calendar months before the

    first day of a calendar year beginning after December 31,

    1969 but no later than January 1, 1979, designated in

    such notice (Block B beginning year) requesting that

    Alcoa do so, Alcoa shall stand ready to produce for Essex

    from Alumina, during the Block B beginning year and each

    calendar year thereafter during the term of this Agreement,

    25,000,000 pounds of Aluminum, plus or minus 15%, in

    accordance with and subject to the terms and conditions of

    this Agreement (Block B). If Essex desires to add Block B

    to this Agreement, the said twelve (12) calendar month notice

    shall in no event be given later than January 1, 1978.
    - (b) In addition to Block A and Block B, upon receipt of notice from Essex at least twelve (12) calendar months before the first day of a calendar year beginning at least twelve (12)

calendar months after the first day of the Block B
beginning year but no later than January 1, 1979,
designated in such notice (Block C beginning year)
requesting that Alcoa do so, Alcoa shall stand ready
to produce for Essex from Alumina during the Block C
beginning year and each calendar year thereafter during
the term of this Agreement, 25,000,000 pounds of Aluminum,
plus or minus 15%, in accordance with and subject to the
terms and conditions of this Agreement (Block C). If
Essex desires to add Block C to this Agreement, the said
twelve (12) calendar month notice shall in no event be given
later than January 1, 1978.

(c) In addition to Block A, Block B and Block C, upon receipt of notice from Essex at least twelve (12) calendar months before the first day of a calendar year beginning at least twelve (12) calendar months after the first day of the Block C beginning year but no later than January 1, 1979, designated in such notice (Block D beginning year) requesting that Alcoa do so, Alcoa shall stand ready to produce for Essex from Alumina during the Block D beginning year and each to calendar year thereafter during the term of this Agreement, 25,000,000 pounds of Aluminum, plus or minus 15%, in accordance with and subject to the terms and conditions of this Agreement (Block D). If Essex desires to add Block D

108 E to this Agreement, the said twelve (12) calendar month notice shall in no event be given later than January 1, 1978.

- 6. Provisions in this Agreement relating to Block B, Block C and Block D, other than provisions relating to adding such Blocks to this Agreement pursuant to paragraph 5 hereof, shall apply to each such Block, respectively, if and when such Block is added to this Agreement pursuant to such paragraph 5.
- 7. (a) Essex shall, prior to January 1, 1968, give Alcoa notice of the quantity of Aluminum it desires Alcoa to produce for Essex from Alumina during the calendar year 1968. Essex shall give Alcoa notice at least ninety (90) days before the first day of each calendar year during the term of this Agreement, except 1968, setting forth the quantity of Aluminum it desires Alcoa to produce for Essex from Alumina during each such year with respect to Block A, Block B, Block C and Block D. A separate notice shall be given for each Block. The notice given with respect to the Start-Up Block shall specify not less than 18,700,000 pounds of Aluminum nor more than 25,300,000 pounds of Aluminum during 1968. Each such notice given with respect to Block A shall specify not less than 42, 500, 000 pounds of Aluminur nor more than 57, 500, 000 pounds of Aluminum. Each such notice given with respect to Block B, Block C and Block D shall specify not less than 21, 250, 000 pounds nor more than 28, 750, 000 pounds of Aluminum. Subject to and in accordance with the terms and conditions of this Agreement, Alcoa shall deliver and Essex shall take delivery of the quantity of Aluminum to be produced from Alumina as specified in each notice given or deemed to be given by Essex pursuant to this paragraph 7, plus or minus 15%, during the year and with respect to the Block to which such notice relates, but in

4

no event more than the maximum or less than the minimum quantity prescribed in this paragraph 7 for such Block.

- (b) Should Essex fail to give any notice required by this paragraph with respect to any Block for any calendar year it shall be deemed for all purposes of this Agreement that a notice was given by Essex specifying 22,000,000 pounds of Aluminum with respect to the Start-Up Block, 50,000,000 pounds of Aluminum with respect to Block A and 25,000,000 pounds of Aluminum with respect to each of the Blocks B, C and D for such year.
- 8. (a) Essex shall pay Alcoa a Monthly Demand Charge with respect to the Start-Up Block for each calendar month during 1968 determined by multiplying the number of pounds of Aluminum delivered during such month times \$0.0500.
- (b) Essex shall pay Alcoa a Monthly Demand Charge with respect to Block A, Block B, Block C and Block D for each calendar month during the term of this Agreement separately computed for each of such Blocks in the following manner.
  - Step (1). Determine the number of pounds of Aluminum delivered by Alcoa to Essex hereunder, with respect to the Block being considered, during the calendar year in which falls the month for which computation of the Monthly Demand Charge is being made, including deliveries made during such month.
  - Step (2). Determine a number of pounds of Aluminum by multiplying the quantity of Aluminum specified in the notice given or deemed to be given by Essex pursuant to paragraph 7 hereof for

the calendar year referred to in Step (1), with respect to the
Block being considered, by a fraction, the denominator of which
is 12 and the numerator of which is the number of months which
have elapsed in such calendar year up to the end of the month
for which computation of the Monthly Demand Charge is being made.

Step (3). Multiply the greater of the weights obtained in Step (1)
or Step (2) times the Demand Charge Factor shown in subparagraph
(d) of this paragraph 3 for the Block being considered.

Step (4). Subtract the aggregate of the Monthly Demand Charges
invoiced to Essex, with respect to the Block being considered, for
each month during the calendar year referred to in Step (1) preceding
the month for which computation of the Monthly Demand Charge is
being made from the amount obtained in Step (3).

Alcoa shall invoice Essex for the amount of money determined in Step (4), i.e. the Monthly Demand Charge for the month under consideration, on or about the 15th day of the next month. Essex shall pay such Monthly Demand Charge on receipt of such invoice.

- (c) As used in subparagraph (d) of this paragraph 8:
  - (1) "Demand Charge Index" means the Engineering News

    Record Construction Cost 20 Cities Average Index

    (1913 = 100) as published in the Engineering News Record.
  - (2) "Base Demand Charge Index" means the arithmetical average of the Demand Charge Index for each month during the period July 1, 1967 through December 31, 1967.

- (3) "Block A Current Demand Charge Index" means the arithmetical average of the Demand Charge Index for each of the months during the period April 1, 1968 through September 30, 1968.
- (4) "Block B Current Demand Charge Index" means the arithmetical average of the Demand Charge Index for each of the months during the six month period April 1 through September 30 of the calendar year immediately preceding the Block B beginning year.
- (5) "Block C Current Demand Charge Index" means the arithmetical average of the Demand Charge Index for each of the months during the six month period April 1 through September 30 of the calendar year immediately preceding the Block C beginning year.
- (6) "Block D Current Demand Charge Index" means the arithmetical average of the Demand Charge Index for each of the months during the six month period April 1 through September 30 of the calendar year immediately preceding the Block D beginning year.
- (d) The Demand Charge Factor for Block A, Block B, Block C and Block D shall be as follows:
  - (1) Block A \$0.0500 per pound of Aluminum correspondingly increased or decreased (carried to the fourth decimal place) by the same percentage as the Block A

Current Demand Charge Index is higher or lower than the Base Demand Charge Index.

- (2) Block B \$0.0500 per pound of Aluminum correspondingly increased or decreased (carried to the fourth decimal place) by the same percentage as the Block B Current Demand Charge Index is higher or lower than the Base Demand Charge Index.
- (3) Block C \$0.0500 per pound of Aluminum correspondingly increased or decreased (carried to the fourth decimal place) by the same percentage as the Block C Current Demand Charge Index is higher or lower than the Base Demand Charge Index.
- (4) Block D \$0.0500 per pound of Aluminum correspondingly increased or decreased (carried to the fourth decimal place) by the same percentage as the Block D Current Demand Charge Index is higher or lower than the Base Demand Charge Index.
- 9. (a) In addition to the Monthly Demand Charges to be paid by Essex under this Agreement, Essex shall pay Alcoa a Production Charge of 10 cents per pound of Aluminum delivered to Essex subject to adjustment as provided below:
  - (b) As used in this Agreement:
    - (1) "Wholesale Price Index" means the Wholesale Price Index - Industrial Commodities (1957-59 = 100) as published by the Bureau of Labor Statistics of the United States Department of Labor.
    - (2) "Labor Index" means the average hourly labor cost
      at Alcoa's Warrick Works as determined by the Cost
      Division of Alcoa's Accounting Department, such cost

to consist of average hourly straight time
earnings, plus shift and overtime premiums,
plus payroll auxiliaries such as, but not limited
to, vacation and holiday pay, retirement fund
payments or accruals, employee insurance, and
social security taxes, plus any other labor-related
cost borne by Alcoa now or in the future.

- (3) "Base Wholesale Price Index" means the arithmetical average of the Wholesale Price Index for each month during the period July 1, 1967 through December 31, 1967.
- (4) "Base Labor Index" means the arithmetical average of the Labor Index for each month during the period July 1, 1967 through December 31, 1967.
- (5) "Current Wholesale Price Index" means the arithmetical average of the Wholesale Price Index for each month of the six consecutive calendar month period beginning on the first day of the nine consecutive calendar month period immediately preceding the date of the Production Charge adjustment under consideration.
- (6) "Current Labor Index" means the arithmetical average of the Labor Index for each month of the six consecutive calendar month period beginning on the first day of the nine consecutive calendar month period immediately preceding the date of the Production Charge adjustment

#### under consideration.

- (c) The Production Charge shown in subparagraph (a) of this paragraph 9 shall be adjusted as of January 1 and July 1 of each year, beginning with January 1, 1969 as follows:
  - Four cents of such Production Charge (Fixed Component) shall not be subject to adjustment.
  - (2) Three cents of such Production Charge (Variable
    Component A) shall be correspondingly increased
    or decreased by the same percentage by which the
    Current Wholesale Price Index is higher or lower
    than the Base Wholesale Price Index.
  - (3) Three cents of such Production Charge (Variable

    Component B) shall be correspondingly increased or

    decreased by the same percentage by which the Current

    Labor Index is higher or lower than the Base Labor

    Index.
  - (4) The adjusted Production Charge shall be equal to the sum of the Fixed Component, Variable Component A and Variable Component B, as adjusted pursuant to subparagraphs (c)(2) and (c)(3) of this paragraph 9 and shall apply until the Production Charge is adjusted on the next adjustment date.
  - (5) In no event shall the adjusted Production Charge

weighted average determined as of such adjustment date of the Demand Charge Factors for Block

A, Block B, Block C and Block D exceed 65% of the
price of unalloyed primary aluminum ingot, 50 pound
size, 99.5% minimum grade, f.o.b. customer's plant
or point where buyer takes custody, in the United
States, no transportation allowance, as published in
the American Metal Market on such adjustment date.
Such weighted average of Demand Charge Factors
shall be determined as follows:

Step A. Multiply the pounds of Aluminum specified in the notice given or deemed to be given by Essex pursuant to paragraph 7 hereof with respect to Block A, Block B, Block C and Block D for the calendar year in which the adjustment date falls times the Demand Charge Factor for each such Block determined pursuant to subparagraph (d) of paragraph 8 of this Agreement.

Step B. Add the results separately obtained for Block A,
Block B, Block C and Block D under Step A.

Step C. Add the pounds of Aluminum for Block A, Block
B, Block C and Block D used in the Step A computation.

Step D. Divide the sum obtained in Step B by the sum

weighted average Demand Charge Factor for purposes of subparagraph (c)(5) of this paragraph 9.

- (d) The Production Charge for Aluminum delivered to Essex hereunder shall be due and payable within thirty (30) days after the date of Alcoa's invoice to Essex therefor.
- 10. The aggregate of the Demand Charges payable by Essex under paragraph 8 hereof shall be periodically adjusted as follows:
  - (a) As used in this Agreement:
    - (1) Block A Nominal Quantity" means 50,000,000 pounds of Aluminum.
    - (2) "Block B Nominal Quantity", "Block C Nominal Quantity"
      or "Block D Nominal Quantity" means 25,000,000 pounds
      of Aluminum.
    - (3) "Absolute Demand Charge for Block A" means the amount obtained by multiplying the Block A Nominal Quantity times the Demand Charge Factor for Block A, established pursuant to paragraph 8 hereof.
    - (4) "Absolute Demand Charge for Block B" means the amount obtained by multiplying the Block B Nominal Quantity times the Demand Charge Factor for Block B, established pur suant to paragraph 8 hereof.
    - (5) "Absolute Demand Charge for Block C" means the amount obtained by multiplying the Block C Nominal Quantity times the Demand Charge Factor for Block C, established pursuant

to paragraph 8 hereof.

- (6) "Absolute Demand Charge for Block D" means the amount obtained by multiplying the Block D Nominal Quantity times the Demand Charge Factor for Block D, established pursuant to paragraph 8 hereof.
- (b) Within thirty (30) days after the end of each consecutive five

  (5) calendar year period during the term of this Agreement, the first such

  period to begin on January 1, 1969, Essex shall pay Alcoa the difference

  obtained by subtracting the aggregate of Monthly Demand Charges paid by

  Essex with respect to Block A for such period from the amount obtained by

  multiplying five times the Absolute Demand Charge for Block A, provided

  that the Monthly Demand Charges paid by Essex with respect to the Start-Up

  Block shall be included in the computation for the first such period. No such

  adjustment shall be made with respect to Block A for any such five (5) calendar

  year period if the aggregate of Monthly Demand Charges paid by Essex with

  respect to such Block for such period shall equal or exceed five (5) times the

  Absolute Demand Charge for Block A.
- (c) Within thirty (30) days after the end of each consecutive five

  (5) calendar year period during the term of this Agreement, the first such period
  to begin with the first day of the Block B beginning year, Essex shall pay Alcoa
  the difference obtained by subtracting the aggregate Monthly Demand Charges
  paid by Essex with respect to Block B for such period from the amount obtained
  by multiplying five (5) times the Absolute Demand Charge for Block B. No such
  adjustment shall be made with respect to Block B for any such five (5) cale far
  year period if the aggregate of Monthly Demand Charges paid by Essex for such

Block for such period shall equal or exceed five (5) times the Absolute Demand Charge for Block B.

- (d) Within thirty (30) days after the end of each consecutive five

  (5) calendar year period during the term of this Agreement, the first such period
  to begin with the first day of the Block C beginning year, Essex shall pay Alcoa
  the difference obtained by subtracting the aggregate of Monthly Demand Charges
  paid by Essex with respect to Block C for such period from the amount obtained
  by multiplying five (5) times the Absolute Demand Charge for Block C. No such
  adjustment shall be made with respect to Block C for any such five (5) calendar
  year period if the aggregate of Monthly Demand Charges paid by Essex for such
  Block for such period shall equal or exceed five (5) times the Absolute Demand
  Charge for Block C.
- (e) Within thirty (30) days after the end of each consecutive five

  (5) calendar year period during the term of this Agreement, the first such period
  to begin with the first day of the Block D beginning year, Essex shall pay Alcoa
  the difference obtained by subtracting the aggregate of Monthly Demand Charges
  paid by Essex with respect to Block D for such period from the amount obtained
  by multiplying five times the Absolute Demand Charge for Block D. No such
  adjustment shall be made with respect to Block D for any such five (5) calendar
  year period if the aggregate of Monthly Demand Charges paid by Essex for such
  Block for such period shall equal or exceed five (5) times the Absolute Demand
  Charge for Block D.
- (f) If after applying subparagraphs (b), (c), (d) and (e) of this paragraph 10, a period of calendar years shorter than five (5) calendar years

remains until expiration of the term of this Agreement as to Block B, Block C or Block D, Essex within thirty (30) days after the end of such shorter period shall pay Alcoa the difference obtained by subtracting the aggregate of Monthly Demand Charges paid by Essex with respect to the Block in question for such shorter period from the amount obtained by multiplying the number of calendar years in such shorter period times the Block B Absolute Demand Charge or the Block C Absolute Demand Charge or the Block C Absolute Demand Charge or the Block D Absolute Demand Charge as the case may be. No such adjustment shall be made with respect to any such Block for any such shorter period if the aggregate of Monthly Demand Charges paid by Essex for such Block for such period shall equal or exceed the number of calendar years in such shorter period times the Absolute Demand Charge for the Block in question.

in the United States and in such quantities as Alcoa shall from time to time designate for purposes of this Agreement. Deliveries made at Alcoa's Warrick Works shall be made by railroad in covered hopper cars or by such other methods of transportation and carrier vehicle or vessel as Alcoa may approve. In the event Alcoa designates delivery of any shipment to an Alcoa plant other than the Warrick Works, Essex shall deliver such shipment by the method of transportation and in the type of carrier vehicle or vessel designated by Alcoa. All transportation costs and charges relating to all deliveries of Alumina to Alcoa shall be borne by Essex. In addition, Essex shall pay Alcoa with respect to each shipment of Alumina delivered. Alcoa at a plant other than the Warrick Works an amount equal to the difference between the transportation costs and charges actually incurred by Essex

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and such costs and charges as Essex would have incurred had such shipment
been delivered to Alcoa at its Warrick Works using the most economical transportation methods and routing available. Should Essex actually incur greater
transportation costs and charges with respect to any shipment of Alumina because
of compliance with Alcoa's instructions under the first sentence of this paragraph
11 than it would have incurred had such shipment been delivered to Alcoa at the
Warrick Works, Alcoa shall reimburse Essex for the excess transportation costs
and charges so incurred, but only if Essex obtained the lowest transportation rates
available and such costs and charges were otherwise reasonably incurred.

- of Alumina by Essex to Alcoa was obtained by continuous weighing and totalizing scales during the course of loading and by such other weighing methods and devices approved by Alcoa in writing prior to such shipment, Alcoa shall accept such weight for such shipment for purposes of this Agreement. If such weight was not so obtained, Alcoa shall have the right to use for purposes of this Agreement the weight of such shipment as determined by Alcoa or the applicable bill of lading weight, as it sees fit. Alcoa shall have the right at all reasonable times to inspect the weighing methods and devices used at the Alumina loading point.
- inventory of 4,000 metric tons of Alumina to Alcoa at the Warrick Works or such other Alcoa plant in the United States as Alcoa may designate which working inventory shall be maintained by Essex at that level throughout the term of this Agreement; provided that the level of such working inventory shall be increased

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beginning year, to 8,000 metric tons at least sixty (60) days prior to the first day of the Block B beginning year, to 8,000 metric tons at least sixty (60) days prior to the first day of the Block C beginning year and to 10,000 metric tons at least sixty (60) days prior to the first day of the Block D beginning year. In addition to the deliveries necessary to establish and maintain the working inventory at the prescribed level, Essex shall deliver Alumina to Alcoa in sufficient quantities and in sufficient time in advance of production to enable Alcoa to make and deliver Aluminum to Essex in accordance with paragraphs 7, 15 and 24(d) hereof, assuming for this purpose that one pound of Aluminum can be made from 1.93 pounds of Alumina.

14. Each shipment of Alumina delivered to Alcoa for conversion to Aluminan hereunder shall conform and Essex warrants that it will conform to the following specifications:

#### (a) Chemical Specifications:

SiO <sub>2</sub>	0.0309
Fe2O3	0.0309
NazO	0.7009
TiO2	0.0059
ZnO	0.005
CuO	0.005
CaO	0.060
V2O5	0.003
MnO	0.001
	0.003
P <sub>2</sub> O <sub>5</sub> Cr <sub>2</sub> O <sub>3</sub>	. 0.000
	0.020
Ga <sub>2</sub> O <sub>3</sub>	98.45%
Al <sub>2</sub> O <sub>3</sub> Moisture plus L. O. I.	1.509

0.030% Maximum
0.030% Maximum
0.700% Maximum
0.005% Maximum
0.005% Maximum
0.005% Maximum
0.005% Maximum
0.005% Maximum
0.003% Maximum
0.003% Maximum
0.003% Maximum
0.003% Maximum
0.000% Maximum
0.000% Maximum
0.000% Maximum
0.150% Maximum

(b) Physical Specifications: No more than 12% shall pass through a 325 mesh Tyler standard screen and no more than 10% should be retained on a 100 mesh Tyler screen, using the dry screen test method. The loss on ignition, after drying at 300°C, shall not exceed 0.65% upon heating at 1200°C as determined by following Alcoa's Analytical Methods for the Analysis of Calcined Alumina, a copy of which has been furnished to Essex, as amended from time to time (hereinafter referred to as "Alcoa's Analytical Methods").

Essex shall make or cause to be made a physical and chemical analysis of a representative sample of each shipment of Alumina prior to delivery to Alcoa hereunder, in accordance with Alcoa's Analytical Methods and Alcoa's Methods of Sampling included in Alcoa's Analytical Methods. The reports of the analysis of said shipment shall be sent air mail to Alcoa immediately after such analysis is made. Notwithstanding any such analysis furnished to Alcoa by Essex, Alcoa may refuse to accept any shipment of Alumina discovered by its own analysis as not confirming to the specifications set forth in this paragraph.

15. On the first day of each calendar month during the term of this Agreement, Essex shall submit a notice to Alcoa requesting delivery of a definite quantity of Aluminum during the next calendar month separately specifying the quantity to be delivered as to each Block. During each calendar month of each calendar year during the term of this Agreement, Alcoa shall deliver and Essex shall take delivery of approximately one-twelfth (1/12) of the quantity of Aluminum to be produced from Alumina as specified by Essex in each

notice given or deemed to be given pursuant to paragraph 7 hereof for such calendar year with respect to Block A, Block B, Block C and Block D, plus or minus 15%, equally distributed on a twenty-one shift basis per week.

Notwithstanding the foregoing, in no event shall Essex during any calendar month take delivery of less than one-twelfth (1/12) of the minimum nor shall Alcoa be required to deliver more than one-twelfth (1/12) of the maximum quantity of Aluminum prescribed for each such Block in paragraph 7(a) of this Agreement. Essex shall take delivery of not less than 1,560,000 pounds nor more than 2,100,000 pounds of Aluminum with respect to the Start-Up Block during each calendar month of 1968. The parties shall make appropriate adjustment in delivery schedules necessitated by shut-down of any Essex plant where Aluminum delivered hereunder is used by reason of vacation of the work force at such plant in accordance with Essex's paid vacation plan for its employees.

- 16. Alcoa shall deliver Aluminum in receptacles furnished by

  Essex. Each shift Essex shall furnish Alcoa the number of receptacles to be

  filled and delivered the next shift. All receptacles shall be suitable for the

  transportation of Aluminum and shall be kept clean and in good condition by

  Essex so that they shall, at all times, be fit for such use. Each such receptacle

  shall have a capacity of approximately eleven thousand (11,000) pounds.
- 17. Alcoa shall deliver Aluminum to Essex and Essex shall accept delivery of Aluminum from Alcoa, in accordance with paragraphs 7, 15 and subparagraph (d) of paragraph 24 hereof. Delivery shall be made at such

point at Alcoa's Warrick Works as Alcoa may from time to time designate (herein called "delivery point"). Essex shall pick up Aluminum at the delivery point in trucks or cars furnished by Essex. The minimum quantity of Aluminum for pick-up at one time shall be ten thousand (10,000) pounds or 1 filled receptacle). All transportation costs and charges and risk of loss shall be borne by Essex. Alcoa shall, when requested by Essex in its sole discretion, clean, repair or rebuild, at Essex's expense, the Essex receptacles used to transport the Aluminum. Essex retains the right, however, to perform such cleaning, repairing or rebuilding. Aluminum shall be delivered to the Essex trucks at a temperature of at least 350°F above the melting point of the Aluminum being supplied.

- 18. Alcoa shall weigh each receptacle before and after it is filled with Aluminum. Alcoa shall make a chemical analysis of Aluminum in each receptacle prior to delivery. The weights and analysis obtained shall be recorded and a copy of the record shall accompany delivery of the receptacle to which it relates. Unless Essex objects to the weights and analysis recorded by Alcoa for any receptacle within forty-eight (48) hours after delivery thereof to Essex such weights and analysis shall be deemed conclusive for all purposes. Essex may check Alcoa's scales used to weigh Aluminum and receptacles at all reasonable times and may have its representative witness the weighing and analysis done by Alcoa.
- 19. Alcoa shall convert Alumina and deliver Aluminum to Essex at a conversion ratio based on the weight of the reducible metallic oxide content of the Alumina, an allowance of 0.5 per cent weight loss and a theoretical conversion ratio of 1.8894 pounds of Alumina per pound of Aluminum. The percentage

of the reducible metallic oxide content in a given quantity of Alumina shall be determined by subtracting the sum of the percentages, by weight, of the sodium oxide (Na<sub>2</sub>O) and calcium oxide (CaO) content, an allowance of 0.5 per cent weight loss (WL) and the loss on ignition (LOI) at 1200°C after drying at 300°C and the moisture loss at 300°C (ML) for such quantity from 100 per cent. The conversion ratio for such quantity shall be computed by dividing the theoretical conversion ratio by the reducible metallic oxide content. Expressed algebraically the conversion ratio (C.R.) that is, the pounds of Alumina required to produce one pound of Aluminum, shall be computed as follows:

WL in the above equation is equal to 0.5%.

For purposes of this paragraph Alcoa will accept the physical and chemical analysis obtained by Essex and sent to Alcoa pursuant to paragraph 14 hereof, but only if such physical and chemical analysis was made in accordance with Alcoa's Analytical Methods and Alcoa's Methods of Sampling included therein.

Alcoa shall keep accurate records showing the weight and chemical anlaysis of each shipment of Alumina received from Essex.

#### 20. (a) As used in this paragraph 20:

(1) "99.75% minimum grade" means Aluminum having a chemical composition within the following limits:

Element		%	
A1	• 99	. 75	Minimum
Si		. 08	Maximum
Fe		.19	Maximum
Cu		. 01	Maximum
· Mn		.003	Maximum
Mg		.01	Maximum

Element	%
Cr .	.002 Maximum
Ni ·	.01 Maximum
Others, each	.03 Maximum
Others total	.10 Maximum

(a) "99.6% minimum grade" means Aluminum having a chemical composition within the following limits:

Element	%	
A1 ·	99.60	Minimum
Si	. 10	Maximum
Fe	. 25	Maximum
Cu	. 02	Maximum
Ma	. 005	Maximum
Mg	. 01	Maximum
Cr	. 005	Maximum
Ni.	. 01	Maximum
Others, each	. 03	Maximum
Others, total	.10	Maximum

(3) "99.5% minimum grade" means Aluminum having a chemical composition within the following limits:

Element	. %
Al ·	99.5 Minimum
Si	. 12 Maximum
Fe	.30 Maximum
Others, each	. 03 Maximum
Others, total	. 10 Maximum

(b) Essex shall accept delivery of Aluminum as produced in the smelting cells at the Warrick Works, without segregation by grade, subject to the following. 100 per cent of Aluminum delivered to Essex hereunder during each calendar month shall be 99.5% minimum grade. During each calendar month Essex may request that up to 45% of Aluminum delivered to Essex hereunder during such month shall be 99.75% minimum grade and up to 80% of Aluminum delivered to Essex hereunder during such month shall be 99.6% minimum grade. Alcoa will deliver for such period during such month designated by Essex in such request, up to 48 consecutive

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hours, a quantity of 99.75% minimum grade specified in such request, but not to exceed 1/15th of the total quantity of Aluminum specified in the notice given by Essex for such calendar month for all Blocks pursuant to paragraph 15 hereof.

Essex may make more than one such request for delivery of 99.75% minimum grade during a calendar month, provided that Alcoa shall have no obligation to comply with any such request after the first request unless on the date such subsequent request is—ade 99.75% minimum grade, 99.6% minimum grade and 99.5% minimum grade shall have been delivered to Essex in the proportionate quantities which Essex would be entitled under this paragraph to receive during such calendar month, based on the total quantity of Aluminum specified in the notice given by Essex for such calendar month for all Blocks pursuant to paragraph 15 hereof, prorated to such date. It is understood that 99.75% minimum grade and 99.6% minimum grade fall within the chemical composition limits of 99.6% minimum grade and that 99.75% minimum grade also falls within the chemical composition limits of 99.6% minimum grade.

- (c) ALCOA MAKES NO WARRANTY CONCERNING THE UTILITY OR
  FITNESS OF ALUMINUM FOR ESSEX'S PURPOSES NOR ANY OTHER WARRANTY
  EXPRESS OR IMPLIED.
- 21. Essex shall retain title to and risk of loss of Alumina delivered by Essex to Alcoa for conversion hereunder subject to the following. Alcoa shall exercise such care in regard to Alumina as a reasonable careful man would exercise under like circumstances, but shall not be liable for any damages for loss of or injury to Alumina which could not have been avoided by the exercise of such care. Alcoa may commingle Alumina delivered to it by Essex with Alcoa's own alumina and reserves the right to deliver Aluminum to Essex hereunder made

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from alumina other than Alumina delivered to it by Essex, but the quantity of Aluminum delivered shall nevertheless be the same as that to which Essex is entitled to receive from Alumina under paragraph 19 hereof. In no event shall Alcoa be obligated to return any Alumina to Essex. It is the intention of the parties that Alcoa shall convert for Essex all Alumina delivered by Essex to Alcoa hereunder and the parties shall plan deliveries and use of Alumina to the end that Alcoa s' all have no Alumina on hand at the expiration of the term of this Agreement. For all purposes it shall be deemed that Alumina delivered to Alcoa for conversion hereunder is stored at the Warrick Works and converted there.

All residual material of Alumina delivered by Essex to Alcoa hereunder remaining in Alcoa's smelting pots after said Alumina has been converted into Aluminum shall become the sole property of Alcoa.

- 22. At approximately six month intervals Alcoa shall submit a report to Essex showing the quantity of Alumina received from Essex and quantity of Aluminum delivered to Essex during the current calendar year and the quantity of Alumina on hand.
- 23. Essex shall pay all taxes and other like charges assessed against Alumina delivered by Essex to Alcoa for conversion hereunder.
- 24. (a) If the performance of this Agreement by either party
  hereto (other than the giving of any notice required to be given by Essex or
  payment of monies due Alcoa from Essex under this Agreement) is delayed,
  interrupted or prevented by reason of any breakdown of machinery, strike,

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labor difficulty, lockout, differences with workmen, labor shortages, accidents, fire, explosions, flood, mobilization, war (declared or undeclared), hostilities, riots, rebellion, revolution, blockade, priorities required or requested by the federal or state government or any subdivision or agency thereof, or any other acts of any government or governments or any subdivision or agency thereof, acts of public enemies, acts of God, inability to secure or delay in securing machinery, equipment, materials, supplies, transportation, transportation facilities, fuel or power or any other cause whether or not of the nature or character specifically enumerated above which is beyond the control of such part; (a) such party shall be excused from the performance of this Agreement (other than the giving of any notice required to be given by Essex or the payment of monies due Alcoa from Essex under this Agreement) while and to the extent that such party is delayed, interrupted or prevented from so performing by one or more of such causes and (b) the performance of this Agreement shall be resumed as soon as practicable after such disability is removed.

- (b) Each party shall give notice to the other within ten (10) days after the occurrence of any such cause, and insofar as known, the probable extent to which it will be unable to perform or be delayed in performing its obligations hereunder. Each party shall exercise due diligence to eliminate or remedy any such causes delaying and interrupting its performance hereunder and shall give the other party prompt written notice when that has been accomplished.
- (c) As used in this Agreement, "Delay Period" means the period of time that either party is excused from performance hereunder. If the Monthly

Demand Charge for any Block for any calendar month during the term of this Agreement falling wholly or partly within a Delay Period is computed in accordance with paragraph 8 hereof by using the number of pounds of Aluminum determined in Step 2 of subparagraph (b) of paragraph 8 hereof, a pro rata portion of such Monthly Demand Charge shall be deferred (Monthly Demand Charge Deferral) based on the quantity of Aluminum requested by Essex pursuant to paragraph 15 hereof for delivery during such calendar month but not delivered because of the occurrence of any such cause excusing performance hereunder during the Delay Period (Delayed Quantity). If Essex is not required by the provisions of paragraph 10 hereof to make any payment to Alcoa for such Block for the adjustment period in which such Delay Period falls, such Monthly Demand Charge Deferral shall be cancelled. If Essex is required to make such payment, such Monthly Demand Charge Deferral shall not be cancelled. Instead, the term of this Agreement shall be extended for a period equal to such Delay Period to permit Alcoa to deliver to Essex the Delayed Quantity. In lieu of the method of computing the Monthly Demand Charge under subparagraph (b) of paragraph 8 hereof, Essex shall pay Alcoa a Monthly Demand Charge upon receipt of Alcoa's invoice therefor separately computed for each Block for each calendar month during any extension of the term of this Agreement based on this paragraph 24 determined by multiplying the number of pounds of Aluminum delivered during such month times the Demand Charge factor for such Block established pursuant to subparagraph (d) of paragraph 8 hereof. Upon completion of delivery of the aggregate of the Delayed Quantities and the payment of all Monthly Demand Charges with respect thereto, all Monthly Demand Charge Deferrals shall be cancelled.

- (d) Paragraphs 7, 10 and the second and third sentences of paragraph 15 of this Agreement shall not apply during any extension of the term of this Agreement based on this paragraph 24. During any extension of the term of this Agreement based on this paragraph 24, Alcoa shall deliver the Delayed Quantity of Aluminum and Essex shall take delivery thereof at such monthly rate as Alcoa shall determine and Essex shall deliver Alumina to Alcoa in sufficient quantities and in sufficient time in advance of production to enable Alcoa to make and deliver such Aluminum to Essex in accordance with the delivery schedule established by Alcoa.
  - damages or for any injury, loss or damage of any kind arising out of its failure to comply with the provisions of paragraph 20 hereof, Alcoa's sole liability and Essex's exclusive remedy for any such failure shall be limited to the replacement, at the delivery point, of any aluminum delivered by Alcoa which is not of the grade which Essex was entitled to receive at the time of delivery thereof pursuant to said paragraph 20, upon return of the nonconforming aluminum to Alcoa (in molten form insofar as practical). Alcoa shall reimburse Essex for the cost incurred by Essex in the transportation of nonconforming aluminum returned to Alcoa but only if return of such nonconforming aluminum is made after inspection by Alcoa and receipt by Essex of return instructions from Alcoa. Essex shall give Alcoa notice of any claim based on nonconforming aluminum within forty-eight (48) hours after delivery thereof to Essex, otherwise such claim shall be deemed waived.
    - 26. The employees, agents and representatives of Essex, while on the premises of Alcoa, shall comply with all reasonable rules and regulations

imposed by Alcoa. Trucks or cars furnished by Essex shall travel only such routes through the Warrick Works as Alcoa may from time to time designate.

- Alcoa from and against any loss, liability, claims, suits and costs, of any kind, excepting such as may be caused by or attributable solely to negligence of Alcoa, arising out of or relating to (a) the operation or presence of trucks or cars furnished by Essex at the Warrick Works or (b) the handling and transportation of Aluminum after delivery thereof to Essex.
- hereof is discontinued, no longer published in the sources indicated or become unavailable, the parties shall agree on a comparable substitute index and if they are unable to agree the selection of a substitute index, the selection a comparable substitute index shall be submitted to arbitration in accordance with the rules of the American Arbitration Association. In the event that the price of unalloyed primary aluminum ingot referred to in paragraph 9 hereof is no longer published in the American Metal Market, Alcoa's published price for such product shall be used for purposes of subparagraph (c)(5) of paragraph 9 hereof.
  - 29. If, at any time during the term of this Agreement, Alcoa enters into an agreement with any other party, who competes with Essex in the United States in the sale of aluminum electrical conductor, other than any subsidiary or affiliate of Alcoa, whereby Alcoa agrees to toll convert into Aluminum smelting grade alumina of substantially the same specifications as Alumina to be toll converted hereunder on substantially the same terms and conditions as provided in this Agreement, but for toll conversion charges and/or payment terms more

favorable than those afforded Essex in this Agreement, such more favorable charges and/or payment terms shall become a part of this Agreement effective as of the next succeeding calendar month after such agreement was entered into by Alcoa with such other party but shall be a part of this Agreement only so long as such more favorable charges and/or payment terms remain in effect in such other agreement.

30. The term of this Agreement shall begin on the date of its execution and shall end on December 31, 1983. Essex may extend the term of this Agreement to December 31, 1988, by notice to that effect given to Alcoa prior to December 31, 1981. Extensions of the term of this Agreement pursuant to paragraph 24 shall begin on January 1, 1984, or, if the term of this Agreement has been extended to December 31, 1988 pursuant to this paragraph, on January 1, 1989, and shall apply consecutively. All of the terms and conditions of this Agreement shall apply throughout its term and any extensions thereof except as otherwise provided in subparagraph (d) of paragraph 24 hereof. If Essex has not added any or all of the Blocks B, C and D to this Agreement pursuant to its options under paragraph 5 hereof by January 1, 1978, it may nevertheless add any or all of such Blocks to this Agreement in accordance with the provisions of paragraph 5 hereof after it gives notice to Alcoa extending the term of this Agreement pursuant to this paragraph; provided that under these circumstances no such Block may begin later than January 1, 1984 and any such Block so added must begin the first day of a calendar year.

31. All notices required or permitted to be given under this Agreement shall be in writing and shall be deemed to be properly given if sent by Certified Mail or Registered Mail to the party entitled to receive such notice at the address shown below or to such other address as may be supplied for the purpose of such notice:

Aluminum Company of America 1501 Alcoa Building Pittsburgh, Pennsylvania 15219

Attention: Vice President in Charge of Sales

Essex Wire Corporation
1601 WALL STREET
FORT WAYNE, INDIANA 46804

Attention:
PRESIDENT

- 32. This Agreement constitutes the entire understanding between the parties hereto with respect to the subject matter hereof, and there are no terms, covenants, conditions, representations or agreements, oral or written, of any nature whatsoever, other than those herein contained. This Agreement supersedes all previous negotiations, commitments and writings between the parties with respect to the subject matter hereof.
- 33. This Agreement may not be released, discharged, abandoned, changed or modified, except by an instrument in writing signed by a duly authorized officer of each of the parties hereto.
- 34. The failure of any party hereto to enforce at any time any of the provisions of the agreement shall in no way be construed to be a waiver of such provisions nor in any way to affect the validity of this Agreement or any part thereof, or the right of any party thereafter to enforce each and every such provision. No waiver of any breach of this Agreement shall be held to be a waiver of any other or

subsequent breach.

35. Neither party may assign this Agreement or any rights hereunder without the prior written consent of the other party. Each party hereto hereby consents to the assignment by the other party hereto of such other party's rights and obligations under this Agreement to any of such other party's subsidiaries, parent, subsidiary of the parent or successor to its entire business, provided the assignor remains liable as guarantor of the assignee's performance hereunder and provided the assignee enters into an agreement to the effect of this paragraph 35.

36. This Agreement shall be governed and interpreted in accordance with the laws of the State of INDIANA.

Agreement in duplicate this 26 day of December . 1967.

duard Dorsning

ATTEST:

Resistant fenting

ESSEX WIRE CORPORATION

1911

ALUMINUM COMPANY OF AMERICA

vice Phes.

## Exhibit P-62

Document to J. H. Thornton from Edw. G. Murray Dated January 24, 1968 Re Projected Aluminum Usage for 1968 ( bill: mr.

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. J. II. Thornton

Edw. G. Murray

Projected Almalnum Usage for 1963 Andrews, Indiana

Marion, Indiana

Jametry 24, 1963

J. C. Dunstan

In the middle of 1967 we estimated that we could use 22,000,000 pounds of 3/8" cluminum redraw rod in 1963 for wire products. We believe now that this is feasible.

We also planned for the use of 18,000,000 pounds in billet.

Thursday, January 18, 1963 at a meeting with Alcon we gave them the following schedule:

January	200,000	July	1, 235, 714
February	1,000,000	August	1, 235, 714
March	1, 400, 000	September	1, 235, 714
April	1, 100, 000	October	1, 235, 714
May	1, 400, 000	Movember	1, 235, 714
June	1, 205, 714	December.	1, 205, 714
		Total Billet	14, 400, 600

We are committed in 1968 as follows:

Amex 13,000,000 Alcoa 22,000,000 plus or minus 15% 40,000,000 Total Nominal

36, 700, 000 Minimum

Do you know of any other use for this surplus as we originally planned on Metal Products Division using 13,000,000 pounds in 1963? The Alcoa contract has demand charge if our commitment is not met.

Halv. G. Murray

/bp

PLANDES'S

## Exhibit P-64

Document to J. H. Thornton from Edw. G. Murray
Dated October 14, 1968 Re Aluminum
Distribution for 1969

Aluminum available from Alcoa for 1969 will be 57,000,000 lbs.

In rod form, we will need 24,000,000 lbs. of this, Econville has projected to produce 18,000,000 lbs. and Alcoa 6,000,000 lbs.

In billet or inget, we will have available 33,000,000 lbs., Boonville will process 25,600,000 lbs. and Alcoa 7,400,000 lbs. In order to fulfill your requirement of 43,000,000 lbs., it will be necessary to purchase an additional 10,200,000 lbs. outside of our Alcoa Contract. When you know the details of this 10,200,000, please let me know.

Edu. G. Eurray

THE

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## Exhibit P-66

Speed Memo to J. Dunstan Dated December 30, 1968 from Edw. Murray Re Alum Rod Usage

SENDER - EXTRACT GOLD COPY FORWARD WILLE AND CREEN COPIES REPHER - KETURN WHITE COPY AND KLIAIN GREEN FOR FILE

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Filt	SPEED	MEMO	<u>.</u>	
Degrafan	I usage.	Marion	a Ind	12-30-68
They ollowing	is the	mouthly	i auna	y of
The following alpen 10 df - 8 1966 - 8 1967 - 1.19 PLEASE REPLY TO	210,000 l	I nue a	6	03,000
,,			way A	f fw
	Advanta >			
Lough In	210 213.80		} 1399	0.50
Dole 26 gen	Signed 20  REPLIER-R	ETURN THIS COPY		

P641



## Exhibit P-101

Confidential Memorandum from H. C. Clough to Files Re Properzi-Essex Wire Billings Dated July 26, 1968 CONFIDENTIAL

P-101

#### MEMORANDUM

July 26, 1968

TO: Files

Properzi-Essex Wire Billings.

I met with Jim Dunstan in New York today and we reached agreement on the amount of fixed costs they would pay for their occupancy of space and miscellaneous overhead re the Properzi installation at Intalco. Out of the total billing of \$661,000 made to them through June 19th, he will pay the entire amount except for \$ 67,000.00 indicated as "fixed costs". In respect to fixed costs for the entire period of occupation through the end of July (at which time we assume the occupation will have ceased, or practically so) he will pay \$40,000. In addition, Intalco has indicated that there is some \$14,000 worth of supplies and miscellaneous spare parts in the Intalco inventory as of now which have not been billed to Amax and hence to Essex --- in respect to these, Dunstan had no knowledge as to quantity, type, or condition, but agreed that Essex would inspect the items and those which were in good condition and useable in a Properzi operation, Essex would pay cost less cost to ship to Indiana.

#### H. C. Clough

HCC: 1gj

Essex got a total of 2,055 M # of rod from Intalco P.S. and the average cost (F.O.B. Intalco) comes out to 32¢/# based on this settlement.

## Exhibit P-103

Summary of Amax Invoices to Essex for Properzi Metal Shipments and Start-up Costs Summary of AMAX Invains to Essay Whice Copp. For Proportion Metal Shipports & Stort-up Cotts

5 104 EYE	ASE	43 404 70/70 BUST Property Me	0	0	0	•
Dat	8	Inv. No.	Anastal Invoice	Amounts Poid	Withhold	Amounts Opra as at June 21,1968
1967	28	365	14087751			
		476	66769-74-	5878474	798000	
1967 Feb.	20	376	36 277 72	2831972	77 5000	
	55		(4089951)	1111111		
	22	(Carcels Im. No.) 355(Add.1) 365 & 12/28/67) 365(Add.2)	9074431	7079431	1995000	
	35		5503101	5907101	798000	
March	24	477	5802101	1200 1101	11/100	17966521
May	20	595	17966521		!	17001607
June	7	680	1700/607		1-1-1-1-1-1-	5916767
	19	482	59 16767			- the same and the same and the same and
			660678 93	2.773978	4387000	408 848 75
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# ANTOW ALUMINUM COMPANY

HOCKEFELLER CENTER

146 E

1270 AVENUE OF THE AMERICAS, NEW YORK, N Y 10020 PLAZA 7-9700

Sustamer Code # 12221	NEW YORK	DATE OF ORDER	AMAX/ESSEX CONTRACT
ESSEX W'RE CORPORATION 2601 SOUTH ADAMS STREET MARION, INDIAN 46952	INVOICE NUMBER	365	AMAX ORDER NUMBIP
ATTENTION: MR. EDWARD G. MURRAY	POINT	FERNDALE, WASHIN	GTON
EAME AS ADOVE UNITES INDICATED	INVOICE	DECEMBER 28, 196	7
ESSEX WIRE CORPORATION CHILES, KENTUCKY	SHIPMENT	DECEMBER 7, 14,	& 18, 1967
	GROSS	183,818	
F.O.B. INTALCO	SHIPPED	GN CNW ALBERT LE	A IC & DELV.
-TEBMS OF PAYMENT	7		
NET 30 DAYS			

ITEM HO.	DESCRIPTION	S UNIT PRICE	QUANT F18.	TITY SHIPPED POUNDS	\$ AMOUNT
	E. C. GRADE VIRGIN ALUMINUM		77	183,818	40,899.5
	HOT METAL	.2225	"	103,010	. 40,033.3
	(Covering Intalco Manifest No's. 3279, 3344 & 3396.)				
	•				

REMITTANCE SHOULD BE MADE TO

P.O. Box 1464, Church Street Station New York, New York 10008 Cancelled

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# ARMY & ALUMINUM CCOPANY

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istor	ner Code # 12221	NEW YORK	0.11 01 0.1	AMAX/E	SSEX CONTRACT
ARION LIFTO- SSEX HILES	WIRE CORP.  O. ADAMS STREET  , INDIANA  MR. EDWARD G. MURRAY  GAME AS ACOVE UNLESS PROSCAFEL)  WIRE CORP.  C. KENTUCKY  DEMMENT  INTALCO  MATRIANE  30 DAYS	NUMBER  INITIAD FERRIDA  INVOICE FERRIDAE  PATE FERRIDAE		968 RUARY 13,15,&	20, 1968
ITEM NO.	DESCRIPTION	UNIT PRICE	QUAN	TITY SHIPFED	s AMOUNT
A)	METAL- HOT METAL LESS: DROSS ALLOWANCES  CONVERSION- DIRECT COSTS: DIRECT LABOR & SUPERVISION SUPPLIES MAINTENANCE ( 1,965.60 + 2 )  INDIRECT COSTS: UTILITIES FIXED COSTS GENERAL MAINTENANCE: TOTAL CONVERSION  TOTAL COST	22.10  7,423.00 3,006.21 982.80  250.00 7,980.00 1,575.73	99	206,095	\$ 45,547.00 21,217.7 \$ 66,764. 1,982 5 8.784.
P			ATES FRANC SHIPE	HE TEHADA 60 -1 THE	faid 5/,5/6

## AMAX ALUMINUM CCOPANY

MOCKEFELLER CENTER

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1270 AVENUE OF THE AMERICAS, NEW YORK, N Y 10020 PLAZA 7-9700

Astomer Code   12221	NEW YORK	DATE OF DEDER	AMAX/Es	SEX CONTRACT
ESSEX WIRE CORPORATION 2601 SOUTH ADAMS STREET MARION, INDIANA 46952	INVOICE NUMBER	376	AMAX O	RULR NUMBI P
ATTENTION: Mr. EDWARD G. MURRAY	DHIP70-TO POINT	FERNDALE, W	ASHINGTON	
GAME AS ADOVE UNIESS INDICATED	. MAYOICE DATE	FEBRUARY 22	, 1968	
ESSEX WIRE CORPORATION CHILES, KENTUCKY	BATE	JANUARY 20,	1968	
-11 MG OF MIRMENT	OPOSS WEIGHT	52,720		
F. O. B.	BHIFFED GN CN			& DELV.
NET 30 DAYS				3
PTTM DESCRIPTION	S UNIT PRICE	QUANTITY PCS.	SHIPPED	\$ AMOUNT
E. C. GRADE VIRGIN ALUMINUM  METAL - HOT METAL LESS; DROSS ALLOWANCES  CONVERSION - DIRECT COSTS: DIRECT LABOR & SUPERVISION SUPPLIES	7,567.00 3,193.00	21	52,720	11,651.12
MAINTENANCE (5,310.00 + 2)	2,655.00			

MANIFEST - # 3688

GENERAL MAINTENANCE

UTILITIES

TOTAL COST

CX

FIXED COSTS

REMITTANCE SHOULD BE MADE TO

INDIRECT COSTS:

TOTAL CONVERSION

P.O. Box 1464, Church Street Station New York, New York 10008 4/10/68

24,648.80

\$36,299.92

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MANOICE -- 0310314

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7,980.00

3,089.00

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1270 AVENUE OF THE AMERICAS, NEV. YORK, N. Y 10020 PLAZA 7-9700

SALES OFFICE | DATE OF DEDLE. CUSTOMIE I OIDER MINISTE ustomer Code # AMAX/ESSEX CONTRACT NEW YORK 12221 AMAX ORULR NUMBIP ESSEX WIRE CORPORATION INVOICE 365 (ADD. 1) NUMBER 2601 SOUTH ADAMS STREET MARION, INDIANA 46952 ATTENTION: MR. EDWARD G. MURRAY FERNDALE, WASHINGTON PAME AS ABOVE URLESS BOOKATERS FEBRUARY 22, 1968 ESSEX WIRE CORPORATION CHILES, DECEMBER 7, 14, & 18, 1967 KENTUCKY F. O. B. INTALCO NET 30 DAYS QUANTITY SHIPPED DESCRIPTION UNIT PRICE AMOUNT 100003 40,899.51 CR. CREDIT THIS IS TO CANCEL INVOICE No. 365 DATED DECEMBER 28, 1967.

REMITTANCE SHOULD BE MADE TO:

P.O. Box 1464, Church Stree Station New York, New York 10005 ON

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1270 AVENUE OF THE AMERICAS, NEW YORK, N Y 10020 PLAZA 7-9700

restomer Code # 12221	NEW YORK	DATE OF OLDER	AMAX/ESSEX CONTRACT
ESSEX WIRE CORPORATION 2601 SOUTH ADAMS STREET MARION, INDIANA 46952	INVOICE NUMBER	365 (ADD. 2)	LAMAX GROEN HORSE
THE 10	BHIFFING	FERNDALE, WAS	HINGTON
EAMS AS ABOVE UMSESS INDICATED	INVOICE DATE	FEBRUARY 22,	1968
ESSEX WIRE CORPORATION CHILES, KENTUCKY	SMIPMENT DATE	DECEMBER 7, .1	4, & 18, 1967
TIME OF BURNEY	GROSS	183,813	
F. O. B. INTALCO	SHIPPED YIA	GN CNW ALBERT	LEA IC & DELV.
NET 30 DAYS	1	-	

1114 NO.	DESCRIPTION	S UNIT PRICE	QUANTI PCS	TY SHIPPED POUNDS	S ANOUNT
B)	CONVERSION - DIRECT COSTS: DIRECT LABOR & SUPERVISION SUPPLIES MAINTENANCE (10,051.31 + 2) INDIRECT COSTS: UTILITIES FIXED COSTS GENERAL MAINTENANCE TOTAL CONVERSION	22.10  12,781.94 8,086.06 5,025.66  500,00 19,950.00 3,777.98	77	183,813	40,6%2.67 50,121.64 \$90,744.31

REFERENCE J.C. DUNSTAN HR. TO T.D. KAUFMANN 1/22/68; T.D. KAUFMANN HR. TO J.C. DUNSTAN 2/8/68, AND SUBSEQUENT VERBAL AGREEMENT.

REMITTANCE SHOULD BE MADE TO

P.O. Box 1464, Church Street Station New York, New York 10008 4/10/68

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## AMAX ALUMINUM CCOPANY

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1270 AVENUE OF THE AMERICAS, NEW YOFIR, N. Y. 10020 PLAZA 7: 9700

SALE OFFICE DATE OF ORDER CUSTOMET OF OUT AMERICAN

NEW YORK

stomer Code # 12221 NEW YORK AMAX ORDER NUMBIE INVOICE 477 ESSEX WIRE CORP. NUMBER 2601 So. ADAMS STREET 46952 MARION , INDIANA ATT: MR. EDWARD G. MURRAY SMITTING FERNDALE, WASHINGTON -- MIF 10-PANS AS ASOYE UNILESS INCHICATED MARCH 24, 1968 ESSEX WIRE CORP. CHILES, KENTUCKY MARCH 14, & 24 , 1968 080S 147,150 SHIPPED GN CHEW ALBERT LEA-IC& DELV. F.O.B. INTALCO - FIGHTEN TO BUSTY-

ITEM MO.	DESCRIPTION	S UNIT PRICE	QUA Pest	NTTTY SHIPPED	s AMOUNT	
1	METAL - HOT METAL 22.25 LESS: DROSS ALLOWNACES .15 22.10	5	54	147,150	\$ 32,520.15	
6)	CONVERSION - DIRECT COSTS: DIRECT LABOR & SUPERVISION SUPPLIES MAINTENANCE (3,486.60 + 2)	9,734.00 3,928.64 1,743.30				
	INDIRECT COSTS: UTILITIES FIXED COSTS GENERAL MAINTENANCE TOTAL CONVERSION	250.00 (1980.00) 1,864.92			25,500.86	
c)	TOTAL COST				\$ 58,021.0 7.920 0 50.041.0	

MANIFESTS - 4171, 4253

REMITTANCE SHOULD BE MADE TO

NET 30 DAYS

P.O. Box 1464, Church Street Station New York, New York 10008 Paid 5/0:/68

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## AMAN ALUMINUM COMPANY

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"ustomer Code # 12221	NEW YORK	DATE OF OLDES	ANNE ESSEX CONTRACT
ESSEX WIRE CORP. 2601 SOUTH ADAMS STREET MARION, INDIANA 46952	INVOICE NUMBER	595	AMAX ONULR NUMBI P
ATT: MR. EDWARD G. MURRAY	SHIPPING	FERNDALE, WASH	HINGTON
BANE AS ABOVE URLESS INDICATED	INVOICE	May 20, 1968	
ESSEX WIRE CORP. CHILES, KENTUCKY	SHIFMENT DATE	MAR CH 25 - AF	PRIL 21, 1968
-TERM OF HIRMOT	GROSS	643,515	
F.O.B. INTALCO	SHIPPED VIA	GN C & NW ALB	ERT LEA IC & DELV.
-TERMS OF PAYMENT	$\dashv$		
NET 30 DAYS			

ITEM MO.	DESCRIPTION	S UNIT PRICE	PCS FOUNDS	S AMOUNT
(A)	METAL - HOT METAL 22.2 LESS: DROSS ALLOWANCES .1 22.1	5	643,515	142,216.82
B)	CONVERSION - DIRECT COSTS: DIRECT LABOR & SUPERVISION SUPPLIES MAINTENANCE (5,268.44 + 2)	10,727.85 12,132.32 2,632.72		
c	INDIRECT COSTS:  JTILITIES  FIXED COSTS  GENERAL MAINTENANCE TOTAL CONVERSION  101A. COST	500.00 7,980.00 3,475.50		37,448.30 179,665,2

COVERING MANIFEST No's. 4295, 4324, 4334, 4351, 4427 & 4505.

REMITTANCE SHOULD BE MADE TO

P.O. Box 1464, Church Street Station New York, New York 10008

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1270 AVENUE OF THE AME	RICAD, HEW YORK, N. Y.		7-9700		
	SALES OFFICE	DATE OF GROEE	AMAY/Fee	X CON	
Customer Code # 12221	NEW YORK AMAX		AMAX OR	ORDER L. WO	
ESSEX WIPE CORPORATION 2601 SOUTH ADAMS STREET MARION, INDIANA 46952 ATTENTION: Mr. EDWARD G. MURRAY	INVOICE NUMBER	680 ERNDALE, WAS			
CHIE TO GRANT AS ACCUS UNLESS DIGICATED					
ESSEX WIRE CORPORATION CHILES,		APRIL 22, -	MAY 19, 1	968	
Kentuck?	0.005	75.010	٠,		
TEMS OF INITIADIT		635,910			
F.O.B. INTALCO	EMILLED .	GN C & NW AL	BERT LEA IC	& DELV.	
NET 30 DAYS			•		
MO. DESCRIPTION	UNIT PRICE	QUANTITY Pes.	SHIPPED SCHOOL	S AMOUNT	
E. C. GRADE VIRGIN ALUMINUM					
LESS: DROSS ALLOWANCES .15	22.10		635,910	140,536.11	
B) CONVERSION - DIRECT COSTS: DIRECT LABOR & SUSERVISION SUPPLIES MAINTENANCE (6,006.98 2)	9,803.39 4,931.98 3,003.49				
INDIRECT COSTS:  UTILITIES FIXED COSTS GENERAL MAINTENANCE	500.00 7,980.00 3,261.10			29,479.9	
TOTAL CONVERSION  C) TOTAL COST				170,016.0	
COVERING MANIFEST No's. 4530, 4561	, 4598. 4614, 4	665 & 4716.		~ ^\\	
REMITTANCE SHOULD BE MADE TO:	1		(	1 Marco	
AMAX ALUMINUM COMPANY	( 11			1	



# AMAX ALUMINUM COMPANY

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1270 AVENUE OF THE AMERICAS, NEW YORK, N. Y. 10020 PLAZA 7-9700

Customer Code # 12221	NEW YORK	DATE OF ORDER	AMAX ORDER NUMBER			
ESSEX WIRE CORP. 2601 SOUTH ADAMS STREET MARION, INDIANA 46952	INVOICE NUMBER	682				
ATTENTION: MR. EDWARD G. MURRAY	SHIPPING	FERNDALE, WASH	FERNDALE, WASHINGTON .			
DAIP TO GAME AS ALOVE UNLESS INDICATEDS	INVOICE DATE	June 19, 1968				
ESSEX WIRE CORP. CHILES, KENTUCKY	SMITMENT	. May 20 - J	UNE 16, 1968			
	GROSS WEIGHT	186,660				
F.O.B. INTALCC -	SHIPPED	GNC & NW AL	BERT LEA IC & DELV.			
NET 30 DAYS						

NET 30 DAYS

TEM DESCRIPTION		UNIT PRICE	QUANTITY SHIPPED		s AMOUNT	
E. C. GRADE VIRGIN ALUMIN  A) METAL - HOT METAL  LESS: DROSS ALLOWANCE	22.25	22.10		186.660	41,251.86	
B) CONVERSION - DIRECT COST SUPPLIES MAINTENANCE (597.36	5:	9,247.43 298.68				
INDIRECT COSTS: FIXED COSTS GENERAL MAINTENANCE TOTAL CONVE	RSION	7,980.00			17,915.81	
C) TOTAL COST					59,167.6	

COVERING MANIFEST 4791 & 4949.

REMITTANCE SHOULD BE MADE TO:

AMAX ALUMINUM COMPANY P.O. Box 1464, Church Street Station New York, New York 10008

BAYDICE - ORIGINAL

Exhibit P-106

Plaintiff's Revised Calculation of Damages
Introduced at Trial

BLACKBOARD REVISED 1968-73 SSEX OKONITE '68-72 Selling Price 105,900,000 120,000,000 CONTRACT Cost 17.0 PRICE 26.80 24.36 (cents) 16.2 - Freight - Rest - .38 margin 25.02 NET-24.36 € 13,323,100 (B) x 225.9 COST 17.00 Net Margin 8.02 17,418,240 \$9,624,000. 1,794,240. 13,328,100 STotal ProjetK \$4,090,140 \$17,418,240 money / Josh

### Exhibit D-1

Four Page Bailment Lease Agreement Between Essex Wire Corporation and American Metal Climax, Inc., Dated December 14, 1966 BAILMENT LEASE AGREEMENT made this /// day of // day of // 1966, between ESSEX WIRE CORPORATION, a Michigan corporation, having its principal office at 1601 Wall Street, in the City of Fort Wayne, State of Indiana ("Essex") and AMERICAN METAL CLIMAX, INC., a New York corporation, having its principal office at 1270 Avenue of the Americas, in the City, County and State of New York ("Amax").

WHEREAS, Essex owns a Properzi continuous caster serial

No. and the furnaces, rolling mill and other appurtenances and facilities necessary for the operation thereof to
produce 3/8" redraw stock, serial Nos. (all of said
equipment and facilities being hereinafter collectively referred to
as the "Properzi");

WHEREAS, Essex is simultaneously herewith delivering the Properzi to and will install it in a plant owned by Amax Realty Corp. and its co-owners and operated by Intalco Aluminum Corporation ("Intalco") in Ferndale, State of Washington, for operation by Amax;

NOW, THEREFORE, it is agreed in consideration of the mutual promises herein made, and for \$10 and other good and valuable considerations, receipt of which is hereby ack wledged:

- 1. The Properzi will at all times be and remain the property of Essex, subject to the bailment lease to Amax hereunder.
- 2. The Properzi may be used by Amax to produce rod bar stock for Amax or its designees or customers at any time the Properzi is not being operated for the Essex account. For any rod bar stock so produced for other than Amax, Amax will pay Essex 3/8¢ per pound so produced. Essex will charge Amax only 1/4¢ per pound for each pound

of bar stock produced on the Properzi for the account of Amax.

- Ferndale, Washington plant designated by Amax in consultation with Amax. After installation, Essex will provide adequate training at Perndale in the operation of the Properzi for the original crew of personnel, who will operate the Properzi. Essex will be responsible for the original running in of the Properzi and Amax' responsibility, under the rod bar stock Purchase and Sale Agreement between the parties of even date herewith, for the delivery of bar stock will not start until the Properzi is fully installed by Essex and operating normally. Throughout the life of this lease Essex shall be obligated to give Amax, or its designee, all the technical assistance needed to run said Properzi. Should the Properzi fail to live up to specifications, Essex promptly will fix or remove the Properzi and restore the site.
  - 4. From the completion of the installation of the Properzi, expected on or before March 31, 1967, and its ru ning in subsequent to that date, Amax shall be responsible for the day-to-day maintenance of the Properzi, making repairs as necessary for its preservation, subject to ordinary wear and tear.
  - 5. Amax shall insure the Properzi for year-to-year periods in reasonable amounts with a reputable insurance company for fire, extended coverage and liability, providing annual certificates of insurance to Essex.
  - 6. Amax shall return the Properzi to Essex on December 31, 1973 (or on such other date as may be mutually agreed upon) in as

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good condition as when received, ordinary wear and tear excepted, it being agreed that Amax shall be responsible for any damage thereto while in its possession, ordinary wear and tear excepted. Essex will then dismantle and remove the Properzi and restore the site.

- 7. Amax agrees as follows:
- (a) not to sell, pledge, loan or part with possession of the Properzi or mortgage the same, and to suffer no claims, encumbrances, or liens to be made thereon;
- (b) to pay all property taxes on the Properzi during the time it is in its possession;
- (c) to permit Essex or its agents at any reasonable time to enter the Ferndale plant to inspect the Properzi and its manner of use;
- (d) to permit Essex to enter the Ferndale plant and take possession of the Properzi and remove it in the event of any breach by Amax of any of its agreements herein, or, if during the period of this lease or any extension thereof, bankruptcy or insolvency proceedings are commenced by or against Amax or Intalco, if a receiver is appointed to take possession of the business of Amax or Intalco, or if Amax or Intalco discontinue business on the premises.
- 8. Essex shall make no claim against Amax for loss of or damage to the Properzi resulting from any cause beyond the control

of Amax, including but not limited to fire, explosion, flood or act of God, except to the extent that Amax or its agents receive any proceeds from insurance on account of any such cause.

- 9. Rental shall be \$10 for the term of this Agreement,
  payable by Amax to Essex in advance upon the execution of this
  Agreement
- 10. Essex shall hold Amax harmless against, and defend Amax in any action for, any and all liability, claims, injunctions, judgments or damages for royalties, patent infringement, trade secret protection, unfair competition or any other relief arising out of or connected directly or indirectly with the use or possession of the Properzi by Amax.

IN WITNESS WHEREOF, the parties hereto have set their hands and seals the day and year first above written.

Attest:

Edward Storm

Attest:

Secretary

ESSEX WIRE CORPORATION

AMERICAN METAL CLIMAX, INC.

Vice President

## Exhibit D-2

Purchase and Sale Agreement Dated December 14, 1966
Between American Metal Climax, Inc.
and Essex Wire Corporation

corporation, having its principal office at 1270 Avenue of the Americas, in the City, County and State of New York ("Amax"), and ESSEX WIRE CORPORATION, a Michigan corporation, having its principal office at 1601 Wall Street, in the City of Fort Wayne, State of Indiana ("Essex"), under the terms and conditions of which Essex hereby purchases and agrees to receive and pay for and Amax sells and agrees to ship from the plant at Ferndale, State of Washington, operated by Intalco Aluminum Corporation, a Delaware corporation, having its principal office at

("Intalco") coiled aluminum rod (bar)

3/8 inch stock as hereinafter stated:

Quantity per Calendar Year:

1967: minimum of 15,000,000 pounds and maximum (at Essex' option) of 18,000,000 pounds.

1968-1973: minimum of 18,000,000 pounds per year and maximum (at Essex' option) of

25,000,000 pounds; except that if production on a potline is started by Amax and Essex after 1970, the quantities for the first subsequent year under this Agreement shall be a minimum of 10,000,000 pounds and a maximum (at Essex' option) of 15,000,000 pounds, and if the next subsequent year falls within the period of this Agreement a minimum of 5,000,000 pounds and

a maximum (at Essex' option) of 10,000,000 pounds for that year.

Quantity of "Extras" In addition, Essex expects that it might need quantities of coiled rod stock in excess of the maximums outlined above in the years 1968 through 1971. Amax upon at least 90 days prior written notice from Essex will furnish additional amounts of rod stock under the terms of this contract if at such times Amax finds it has metal available for this purpose. Should Amax not have metal available for this purpose but does have rod processing capacity available, Amax at the request of Essex will offer to purchase electrical grade primary aluminum for the account of Essex and process it into coiled rod stock for a charge of 2.75 cents per pound of such additional rod stock. Essex may also deliver additional aluminum ingot to Amax at the Intalco plant rod stock processing site and Amax shall process it into coiled rod stock for a charge of 2.75 cents per pound of coiled rod stock.

Quality:

Price:

Specification Grade Electrical Conductor - 62%

conductivity when demanded.

23.85 cents per pound, based on an aluminum ingot price of 24.5 cents per pound; said price to be

adjusted upward or downward by the amount that the price of aluminum ingot published in American Metal Market, from time to time, rises or falls below said aluminum price. The said price is based on a freight rate of 1.68 cents per pound of aluminum from Intalco to Paducah, Kentucky, currently being negotiated. Should this rate be reduced, the said price will be increased by one half the reduction in freight.

Terms:

Net cash payable ten (10) days after shipment.

Delivery:

F.O.B. railroad cars Intalco.

#### CC DITIONS OF SALE

- Amax shall supply and Essex shall reimburse Amax all the costs in supplying the quantities of binary alloys required to produce the quantities of aluminum coiled rod stock mentioned above.
- 2. Amax shall have no obligation under this Agreement until the Properzi facilities covered by the Bailment Lease between the parties of even date herewith have been fully installed by Essex and are operating normally.
- 3. Should any cause beyond the control of either of the parties hereto, including but not limited to fires, floods, labor difficulties and work stoppages, strikes, acts of God, acts or retrictions of government or agencies thereof, transportation delays, explosions, accidents, electrical power interruptions, interruption

And the same

of raw material supplies, failure of the Properzi rod processing and related equipment leased by Essex to Amax to function properly, but not including technological change or obsolescence, interfere with production, consumption, receipt, use or transportation of the said product, deliveries under this Agreement shall be suspended at the instance of the party suffering the disability during the period of such condition or the period necessary to remove such cause. The time to make and accept deliveries hereunder shall be extended by the period of such suspension of deliveries.

- 4. Should any sales, excise or other taxes be imposed in respect to the sale of the coiled rod stock to Essex, Essex shall assume payment of such taxes.
- 5. All settlements under this Agreement are to be governed by the actual railroad weights, ascertained at the usual point at which carload shipments from the plant at Ferndale are weighed.
- deliver in any month after commencement of production more than the maximum quantity above specified divided by the number of months remaining in the year less two. With respect to 1968 through 1973, Amax shall not be obligated to deliver in any month more than 1/10th of the maximum quantity above specified for any calendar year. Such part of the said maximum quantity as to which delivery shall not be taken by Essex in any month may be reserved for subsequent delivery hereunder. Essex shall give quantity and shipping instructions to Amax at least 40 days before the beginning of each month in which shipment is to be made.

- 7. Amax and Essex shall establish startards of quality control. Thereupon, Amax shall perform all tests regimed by such standards at the commencement of a production run, and shall forward certifications of the results of quality control tests to Essex with each shipment.
- 8. Amax warrants only that the product shall conform to the specifications set forth above, and makes no other warranty, express or implied, of any nature whatsoever. Any claim that the product delivered hereunder does not conform to such specifications must be presented by Essex to Amax within 30 days after delivery thereof. Amax will not be responsible for loss of profits, consequential, resultant or secondary damages, suitability for particular purposes or for any other damages of any nature whatsoever, but shall be responsible solely for replacement without expense to Essex of any product not conforming to said specifications.
- 9. This Agreement shall be deemed to have been entered into hereunder and provisions hereof shall be construed and the application hereof determined by the laws of the State of New York. Any controversy or claim arising out of this Agreement or any alleged breach hereof shall be determined by arbitration in New York City in accordance with the rules then obtaining of the American Arbitration Association and judgment upon any award rendered therein may be entered in the Supreme Court of the State of New York or in any other court of appropriate jurisdiction.

168

IN WITNESS WHEREOF, the parties hereto have set to hands and seals the day and year first above written.

Attest:

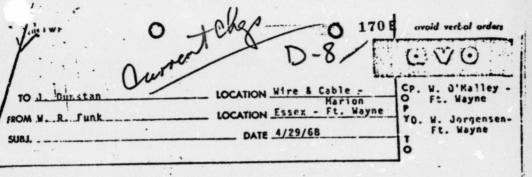
AMERICAN METAL CLIMAX, INC.

By Stephen Tubacher Vice President

ESSEX WIRE CORPORATION

### Exhibit D-8

Memorandum from W. R. Funk to J. Dunstan Dated 4/29/68 with Copies to W. O'Malley and W. Jorgensen



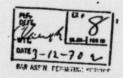
We visited the Intalco aluminum operations in Ferndale, Washington and discussed the billing of the Properizi operating costs with their personnel. This was done mostly with a John Cameron who is the local chief financial officer of Intalco. Unfortunately, Mr. H. Clough of Amex did not come out, so we had no one from Amex to discuss the matters with, hence no final settlement could be made.

It seemed to me that Intalco (J. Cameron) was more anxious to justify his billing to Amex, by general statements than to discuss the details and why C. Kilburn had not been given cost details (such as hours by employees) on a current basis. Intalco's point was that the allocated employees) on a current basis in the metal so to be recovered by Intalco. charges were additional costs in the metal so to be recovered by Intalco. They said that they had nothing to do with the charging of this metal to Essex by Amex. The allocations are a spreading of the entire operations general overhead.

based on the findings we submit a recap of the amounts which are due Amex by Essex for expenditures made in behalf of the Properizi.

	10 Wks Enling 12/31/67	4 Wks Ending 1/28/68	4 Wks Ending 2/25/68	4 Wks Ending 3/24/68	Total Due Amex	Total Charged by Intalco
Direct Charges Labor & Supervision Supplies Direct Maint. Utilities		\$ 6,629 3,900 1,685	\$ 7,423 3,006 1,966	\$ 9,734 3,929 3,487	\$36,568 18,921 12,164	\$ 36,568 18,921 12,164 1,250
Total Direct Fixed Costs Gen'l. Maint.	26,394	12,464 -0- -0-	12,645 -0- -0-	17,400 -0- -0-	68,903 -0- -0-	68,903 43,890 8,999
Grand Total	26,394	12,464	12,645	17,400	68,903	121,792

In addition, the metal content of the rod shipped during this period is to be billed to Essex.



There is a discrepancy between the details attached to the billing to Essex for January and that given to us during our visit. Believe the amounts received at our visit to be accurate as subsequent changes were made by latalco.

#### Labor & Supervision - \$36,568 J

C. Kilburn feels that this appears reasonable, so we should accept even though the details were not provided. We feel that C. Kilburn must be given the weekly payroll sheets showing the hours and dollars by employee charged to the Properizi. He in turn will initial approval, to this is later added the fringe benefit which is almost 30%.

### Supplies- \$18,921 #

C. Kilburn feels that these are also reasonable. Here again he should be given a detailed list weekly of all supplies charged to the Properizi so he can initial his approval.

#### Direct Maintenance - \$12,164

The hours of maintenance charged to the Properizi appeared high to C. Kilburn and to me. We did review some of the maintenance department hour logs, but since time had lapsed, C. Kilburn could not explain several days which showed a large number of maintenance hours. Here again Intalco should have been furnishing these logs to C. Kilburn each week so he could scrutinize and initial his approval.

Overall, Intalco should have been supplying (they do have the data) to C. Kilburn with weekly or daily details so they could be verified while fresh in his mind. As it is, he can only say the figures appear to be reasonable.

The hourly rate used to charge the maintenance was \$4.68 this is made up of the base rate of \$3.63 plus \$1.05 for fringe benefits and premium pay. Intalco says that the hourly rate of the maintenance department including the chief engineer and his staff, plus gauge specialists, etc.; This overhead was there before the Properizi and is needed to make the metal. Therefore, we feel that Essex is not liable for the general maintenance overhead.

#### Utilities - \$1,250

This is Intalco estimate since no meters are available. The figure seems reasonable.

#### Total Direct Charge - \$68,903

This is the total billed by Intalco and C. Kilburn says that it is reasonably accurate so we recommend that it be paid.

rized Cost (113,890

-3- 52 /wh.

172 E 4/29/68

The \$1995 a week quoted by Intalco covers an allocation of their overall general plant costs to the Cast House and in turn the Properizi. Intalco does not come to a specific product cost so to arrive at the full cost of metal, they add allocations. Intalco has arrived at what would be considered by them to be the fair share that a Properizi operation would absorb of the general plant costs (this general plant cost being large as they do not arrive at product costs) if owned by intalco. The general overhead items relate to the making of aluminum hence should be absorbed in the cost of the metal.

We did not verify the accuracy of the \$1995 for two reasons, firstly we do not have access to Intalco books and secondly, it seems unnecessary as the allocation of general cost are not applicable to the Properizi operation. The only items included in the \$1995 that remotely apply to the running in time of the Properizi would be the charge for lab analysis (\$128 a week), and the \$577 of other fixed costs as rent, taxes and insurance. (These items would total Lab. \$2816 Rent \$12,694) of course, we do not feel these should be billed or paid as they are not additional costs to Intalco; they are simply part of Intalco general overhead which should be absorbed in the cost of the metal.

The same principles apply to the General Maintenance charge as to the fixed Cost allocation. This is to allocation of the cost of the maintenance for the General and Service Cost Centers. This category Includes such as the revamping of the Cast House facilities (not the Properizi section). In no way could these costs be attributed to the Properizi section. We would even question the method used to allocate if this operation. We would even question the method used to allocate if this were a cost center operation of Essex as they used the percentage of the direct maintenance used in the Properizi to the total direct maintenance. This method, of course, results in an over absorption by any start up cost center.

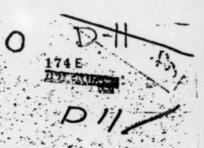
#### Conclusion

- Essex should at most pay for only the out of pocket costs incurred by the Properizi but paid for by Intalco. The total billing being \$68,903 plus the metal cost.
- Intalco should daily and/or weekly give the cost detail (employees
  hours and amounts for direct, supervision and maintenance) to C. Kilburn.
  Essex should not pay for expenditures which are not currently reviewed and
  approved by C. Kilburn.

W. K. Funk

10

Letter from Herbert C. Clough to James Dunstan Dated June 25, 1968 with Statement Attached



June 25, 1968

Vice President
Essex Wire Corporation
PCOL South Plans
Enripe, Jahrena 46953

#### Dear Jim:

According to our Accounting Department the enclosed statement represents the status of your account with us as at June 21, 1968. This statement indicates that while we have billed you \$660,000, you have only paid us approximately \$203,000.

I note that under the terms of our agreements any controversies or claims arising between us shall be settled by arbitration and unless we receive prempt payment from you in respect to our outstanding uncollected amounts, we will be forced to formally request arbitration in this matter.

sincerely yours.

Rerbert C. Clough, Vice President

ECC:lgj

bec: Mr. D. T. Kalil

DATE 3-11-7 04

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Letter to Herbert C. Clough from James C. Dunstan Dated July 5, 1968 Re Billing

AD CABLE DIVISION • 2601 SOUTH ACAMS • MARION, INDIANA 46953

July 5, 1968

Herbert C. Clough, Vice President Amax Aluminum Co. 35 Mason Street Greenwich, Conn. 06831

Dear Herb:

In answer to your letter, we have just received your final billings. Our analysis is as follows:

> Total Amax Billing Essex Paid

- \$660,678.93 \* \$207,939.98

Balance

\$452,738.95

Of the \$452,738.95, it appears that \$384,908.95 has basis in fact, but the \$67,830.00 of fixed charges have never been resolved to our satisfaction.

My recommendation would be for you to check the four figures total billing. amount Essex paid, balance due and the fixed charge of \$67,830. After you have confirmed these figures, I would like to have one last meeting to see if we can reach a compromise on \$67,830 in fixed charges.

If this were resolved, Essex would pay immediately the adjusted balance due. If this can not be resolved, it appears that arbitration would be the next step.

> Sincerely yours, ESSEX WIRE CORPORATION Wire and Cable Division

JCD:mw

C. Dunstan resident and General Manager

Inter-Office Memorandum from T. D. Briggs to H. C. Clough Dated May 29, 1968 Re Properzi Costs and Premiums

### INTALCO ALUMINUM

CORPORATION

INTER-OFFICE MEMORANDUM

16 U 30

H. C. Clough

T. D. Brisss ed

DATE .. May 29, 1968

COPY TO J. Loyer

J. Cameron

Properzi Costs and Premiums

Jean asked me to redevelop the cost figures on the Properzi to reflect updated experience on the machine. The cost sheets I gave you when you were last here were developed prior to operation of the machine and reflected some fairly gross guestimates.

I came up with a direct machine hour rate of \$72.76. This does not include rent, fout allocation, or depreciation, but does include labor, supervision, peace, gas, water, operating supplies, maintenance, and cast house in-department services. I have figured the costs on two shifts or 4160 hours (two shifts x 40 hours x 52 weeks = 4160 hours). Actually, the rate of \$72.76 per hour for the machine is applicable to one shift as well since the costs are direct and assumed variable.

The cost breakdown for E.C. grade wire at various efficiency levels x 14,000 lb hourly rated capacity.

	1.	70%	80%	90%	100%	
Molten metal, boron treated	. \$	.15769	.15769	.15769	.15769	
Machine Cost		.00742	.00650	.00577	.00520	
Shipping Cost		.00047	.00047	.00047	.00047	
Dross Recovery Cost		.00064	.00064	-90064	.00064	
Rent' & Plant Allocation to Cast House	_	.00431	.00431	.00431	.00431	
Total				.16888	.16831	
Premium over T-ingot		.00869	.00777	.00704	.00647	
1bs per hour		9,800	11,200	2,600	14,000	

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Page 2

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100%

two shift annual output - 1bs.

40,768,000

46,592,000 52,416,000 58,

The machine is supposed to be able to get 18,000 to 20,000 lbs per hour, but for the sake of this cost analysis I have used the nominal rating of 14,000 lbs per hour.

These figures are calculated on rent, excluding whatever the Properzi equipment cost, since Intalco doesn't own the equipment. If you take over the machine, assume these numbers:

\$1,500,000 = \$125,000 - 40,768,000 lbs = \$.00307/lb.

This probably should be added to get a better recent cost from your point of view and should be added to the premium .

As you can see, the cost of the Properzi process is not steep. Something the Owners have never really understood about the cast house (remember all those cast house cost sessions) the metal is the big cost in the cast house. Secondly, the plant allocation to the cast house (overhead), which includes lab, material handling, administration, services, etc is the other really significant cost. Obviously, with a plant this size and complex, the overhead is fairly sizable. The actual direct processing cost in the cast house, except perhaps billet, is really not terribly significant.

The key, to my way of thinking, is that as long as the premium (including the additional rent) is less than the price premium, incrementally the machine is sound cost-wise. For example, if you get a 4.0c price premium for wire and the premium is 0.8c the incremental profit beats any other product you sell, including billet.

Herb, the question of cost is obviously secondary to;

(1) is the machine functionally sound and will it do what it is supposed to do and,

.1 .

(2) can you sell the wire.

Let me know if you need anything else.

TDB/ev

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Memorandum from J. L. Loyer to Herb Clough Dated June 19, 1968 Re Properzi with Attachments

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Herb Clough

June 19, 1968

S. A. Furbacher (w/encl.)
RF, PT, RAG, IM

J. L. Loyer

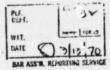
### PROPERZI

Please find enclosed a memorandum prepared by our people which summarizes the present Properzi situation, in the event that AMAX would reach some agreement with Essex.

Please note that approximately six weeks would be needed, after we received a green light, to put the Properzi in proper operation. It is estimated that two weeks of operation would bring it up to 70,000 lbs./day of salable product, on a one-shift basis.

Please let me have your comments.

JLL/dp





# INTALOO ALUMINUM CORPORATION

INTER-OFFICE MEMORANDUM

186.E:

n I. L. Love

ROM I. R. Macdonald

. R. Macdonald

PROPERZI

DATE June 18, 1968

COPY TO R. Ferrie

P. Thaure
R.A. Gustafson
C. K. Li
L. Bloedel

The following areas of agreement were obtained at a meeting of Properzi involved personnel:

#### FURNACES

The capacity of the Warwick furnaces serving the Properzi operation will restrict productive capacity, both on E.C. grade rod and on other alloy specifications. On experience to date maximum expectations of cast' 3 capacity are 11,000 lbs/hr on EC metal and 9,000 lbs/hr on other alloy metal. Considering the furnaces alone as the restriction on capacity, and considering a one shift per day operation, the projected output of saleable EC rod is 70,000 lbs/day.

As this one shift consideration includes furnace preparation, scrap charging etc. on off shifts, this productive rate would be reduced considerably on a multishift production operation.

#### METAL TRANSFER SYSTEM

The pouring spout problem remains to be resolved. It is expected, based on the experience of others, that oxidized Titanium spouts will provide a solution such that previously mentioned one shift capacity will be maintained. This statement refers to production of EC metal only. It be maintained that Intalco obtain all information available on horizontal is recommended that Intalco obtain all information available on horizontal metal transfer to the casting wheel. It was agreed, based on Intalco's present knowledge, that horizontal metal feed is likely mandatory for production of alloy metal rod.

### METAL COOLING CAPACITY

Beyond 11,000 lbs/hr of EC metal we have not developed a practice which will produce a sound casting. Casting beyond this rate (2.3 r.p.n. casting wheel) produces crac'ing caused by cooling stresses.

#### Page 2

The addition of Cu and grain refiners to the EC furnace batch, as recommended by Nichola Wire, to resolve cracking, was not attempted before closure of Properzi operators.

The absence of cooling water controls will have to be remedied to permit development of casting practices beyond those established by Essex wire.

Horizontal metal feed to the casting wheel will permit reduced cooling rates and sound casting at higher pouring rates.

#### CASTING WHEEL

The ring mold is considered satisfactory for production rates previously

#### ALIGNMENT OF CASTING MACHINE TO REDUCTION MILL

The present 25° angle between casting machine and reduction mill is considered acceptable for EC rod production up to the design capacity of 14000 lbs/hour. This criteria is based on statements from personnel of Nichols Wire and Aluminum and Intalco has no grounds for disagreement. Intalco similarly agrees with Nichols personnel that alloy rod production will require the minimum offset angle between casting machine and reduction mill.

Intalco opinion is that, if Amax were to take over the Properzi installation, that the offset angle should be reduced before operation of the equipment.

#### REDUCTION MILL

The mill is considered satisfactory.

The "art" of emulsion control will remain a development area. We have no satisfactory method for definitive criteria of good emulsion. This development area will require equipment and maintenance. As must be informed of the cost potential. Mobil have recommended installation of suitable storage and handling facilities for the soluble oils required. This recommendation should be adopted.

#### COILER

The coiler is considered satisfactory. Three problems have yet to be resolved:

- 1. Size of coil (A. Allier to O.T.T.)
- 2. Coil closure gates. (Intalco maintenance development).
- 3. Coil handling of coiler not considered critical;

but other means of coil removal and handling should be investigated; i.e. system installed at Anaconda.

PRODUCT HANDLING

Cooling, strapping and/or wrapping, weighing etc.)

This production area has been completely ignored by Essex and existing facilities are inadequate. However, the equipment requirements for improved product handling are a direct factor of production output required. Initially the product strapping equipment recommended by the Signode field engineer should be purchased and installed. This equipment lends itself to modification to meet more demanding packing requirements and will remain an integral part of any expanded handling facilities.

#### GENERAL FACILITIES

The erection of proposed building area at south east corner of Properzi area is recommended as necessary. This enclosed area will provide office space for production supervisor, lunch area for personnel, and installation space for required product testing equipment.

### DETAILED DEVELOPMENT AND MINOR MODIFICATIONS

Attached is a complete list of agreed areas of operational development required and minor modification considered necessary for operation of the Properzi.

Page 4

### MODIFICATIONS 70 PROPERZI MACHINE

- 1. Reduction of casting wheel to reduction mill offset angle.
- 2. Increase size of casting pit.
- 3. Lower launder system to improve flow control.
- 4. Install Hunter flow control device.
- 5. Install automatic mill stop device.
- Changes and modifications to cooling water control including instrumentation.
- 7. Complete mill overhaul including emulsion of lubricating systems.
- 8. Complete check of electrical control circuits.
- 9. Installation of soluble oil storage (per Mobil recommendation).
- 10. Install personnel and testing enclosure.
- :11. Minor equipment and instrumentation modifications.

The total cost of the modifications has not been calculated. Best guesstimate suggests a total cost of \$10,000.

### OPERATIONAL DEVELOPMENT REQUIRED

- 1. Pouring spout material.
- 2. Emulsion control.
- 3. Casting practices (including furnaces)
- 4. Scrap handling.
- 5. Product handling.

#### PROJECTED PROPERZI TAKEOVER

#### 1. Modification Timing

Enlarge pit and minimize wheel to mill offset angle - engineering-construction, 6 weeks.

During this period all minor maintenance modifications and mill overhaul can be completed.

During this period we would request presence of Mr. John Fox, Chief Engineer, Nichols Wire, to:

- (a) supervise mill overhaul
  - (b) contribute to engineering of wheel to mill angle decrease.

During this period we would send Intalco production representatives to Nichols Wire for further information and production observation and consultation with Mr. Paul Raiford.

#### 2. Production Timing

The predicted rate of 70,000 lbs. of saleable rod/day, based on one shift operation can be realized within two weeks. Two factors will, however, extend this period:

- (a) resolution of pouring spout problem.
- (b) Manning All previously trained personnel will have been absorbed into the Cast House operating organization.

The development time required to create another trained crew is wholly a factor of how many previous Properzi personnel choose to bid again into Properzi job classifications.

#### ADDITIONAL HELP

No forecast: as problems arise beyond Intalco's abilities, Nichols Wire, Mobil Oil, etc. will be used in consultant capacity.

As additional Properzi Model 8 equipment comes into production, existing lines of communication with Kaiser & Reynolds will prove useful.

Immediately Pechiney can provide necessary information regarding horizontal metal flow to the casting wheel.

KKY/ev

Memorandum to the Files Dictated by H. C. Clough Re Essex Wire Dated June 18, 1968 MEMORANDUM

PRECEIVED
JUN181003
L. S.A.F.

193E-

June 18, 1968 (Dictated June 17th)

TO: Files

RE: Essex Wire

Jim Dunstan called me this (Monday) morning and said that he wanted to apprise me of the results of a little homework he had done:

Number 7 machine were low, that possibly we had not included the sales tax, and generally he felt that the figure we had used for our standard on which to base our offer of \$818,000 was unrealistic. I told him that maybe we were \$50,000 high or low, but I doubted there was any substantial error in the purchase price of the machinery and equipment, itself, and that duty and freight were pretty well definable and this left not too much room for error.

He said that his total capitalized cost on the furnaces was \$165,000. I told him I was no expert, but that \$2.00 per pound of furnace capacity was way over what it should have cost. He said, "Well, he just figured that our \$30,000 to \$55,000 offer was pretty far out, but that he hadn't asked Charlie Kilburn what the salvage value was, but he would do so tomorrow so that we could talk again on Wednesday": I offered the comment that Loyer says that the furnaces are too small for a Number 8 and, therefore, he ought to take a look at that factor, too.

3. He says that they have come up with the following estimates for removing the Properzi and coiler (not the furnace) and re-installing it:

Dyt 84 40 - id 1 1 3/16/70 Removal: \$ 48,000
Freight: 15,000
Re-installation 175,000
TOTAL \$ 238,000

Files June 18, 1968 Page Two

I pointed out to him that in working out his economics he should also take into consideration that he would be starting out with a new location with new crews to train and a machine which apparently hadn't been completely debugged and judging from the magnitude of the start-up costs he claims to have incurred at Intalco, he better add a healthy chunck of money in making his calculations.

I told him that in recognition of one of their principal problems -- that they didn't want to swallow the significant write-off against the P&L this year, that I thought we might be able to work out a deal by which we would pay a premium price (above our \$825,000) for the machinery and equipment in return for their paying a premium of the equivalent total value above our offered 25.5¢ per pound for redraw. He seemed to follow the idea all right, but he said that the 25.5¢ was an unrealistic price to begin with. I told him that we had worked this out having considered three or four different angles including the realization value to us of alternative methods of pedalling our aluminum and figured that this was just about rock bottom. I mentioned that it also seemed to compare pretty favorably with the old market price of redraw at 27¢ and certainly vs. the new quoted price of 28.1¢. I told him that we have worked it up from the probable cost to them of hot metal and we couldn't possibly be more than a mill wrong ... - .

Jim said that they might take 1.4 to 1.5 million for the complete installation at Intalco as is, but I told him the possibility of our paying above \$850,000 was practically nil except on a maneuver such as I mentioned above. I said that if, in fact, the going market price for redraw were below 25.5¢, then our investment of even \$825,000 in their equipment would be an extremely marginal proposition.

I agreed to give Steve a rundown on our conversation and he agreed to check back with Charlie Kilburn on the salvage value of the furnace and that I would call him on Wednesday.

H. C. Clough

HCC: lgj

Memorandum to Mr. Erwin Weil Re Essex Wire Corporation Controversy Dated October 30, 1968 from H. C. Clough 7

MEMORANDUM

196E

October 30, 1968

TO: Mr. Erwin Weil

RE: Essex Wire Corporation Controversy

I am enclosing herewith a check drawn on July 29, 1968 by
Essex Wire Corporation on the Lincoln National Bank & Trust
Company, Fort Wayne, Indiana. It is their check No. 37178
in the amount of \$424,898.95 to the order of American Metal
Climax, Inc. and is endorsed "final settlement of all disputes..."

I would appreciate your holding this check in safe keeping until disposition is decided upon. For your information, we are engage! in a substantial controversy with Essex and counsel advises that this check must not be deposited, but can be held by us in safe keeping until the dispute is resolved.

A C. Clough

Received BY: G. Hunsel

Date:

GUT. 31 1938

Deft Eight 41-cd 80.3/16/70

Office Memorandum to Essex Wire Corporation from Herbert C. Clough Dated January 2, 1969 Returning Check No. 37178 with Receipt for Letter and Check and Endorsement on Back of Check

D-5/ 19887, W

Inc. Detect A.CHORANDUM

Maria Cina

January 2, 1969

Essex Wire Corporation 1601 Wall Street Fort Wayne, Indiana 46804

Dear Sirs:

We are returning herewith your check No. 37178 dated

July 29, 1968 in the amount of \$424,898.95 since after consultation

with counsel we find that the restrictive endorsements thereon

are not acceptable in the circumstances.

sincerely,

Herbert C. Clough, Vice President

Enc. 1gj

bcc: Jay Topkis, Esq.

Deft Eth 51-12

AMERICAN METAL CLIMAX, INC. 199E

INTER-OFFICE MEMORANDUM

SUBJECT .

DATE. 1/10

Art Clough

FROM. Skien Shiphied

	OTIONS TO DELIVERING EMPLOYSE    Stop to whom, date, and   Other ONLY
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Receiv	ed the numbered article described below.
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The above Check was returned to

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Negotiation of this check constitutes final settlement of all coutes arising from Bailment Lease Agreement and Purchase and Sale Agreement both dated December 14, 1966, between Essex Wire Corporation and American Metal Climax, Inc.

Letter to James Dunstan from T. D. Kaufmann Dated March 13, 1968 D-93

203 E

Maych 13, 1968

Mr. James Dunstan Essex Wire Co. 2601 So. Adams Marion, Indiana

Dear Jim:

MIT. VIII. V

This is in confirmation of one a shone conversation this morning. Attached is a memorandum from John Suneron, the chief accountant at Intalco, giving the breakdown of the overhead charges. I think it is self-explanatory, but if you have more questions I will be at Intalco on Friday morning. The best way to get this problem behind on its obviously to have the Properzi operating at an acceptable rate to that there charges are on Amax' back rather than Essex'.

Look forward to seeing you on the 22nd. Best regards,

Sincerely.

T. D. Kaufmann

P.S. Jim, apropos of overhald about, I thought put would appreciate the second attachment

TDK:ph

In addition I told Jim:

- (1) That Kilburn was shown the computer sheets on maintenance charges, that he knew how many hours the direct maintenance is being charged and that the charge was only \$4.68 a year which is low.
- (2) As for planning O'Malley's trips to Newfoundland, I emphasized that the timing couldn't be worse. I said when asked I had told Amax officials that our experience with Essex over the year had shown that on the technical front the Properzi machine was a year late and not yet working properly, that on the commercial front Essex had gotten out of their contract commitments in 1967 claiming no legal or moral obligation, and during 1963 asking for better terms, and that finally on the financial front Essex is yet to pay Amax any money owed, and have cavilled over every charge. He got the message.

Letter from Thomas D. Kaufmann to Mr. Paul O'Malley Dated August 8, 1966 with Attachments DEF SIMILED D. 75 DET SILVENDEN SILVENDE SILVENDEN SILVE

August 8, 1966

Mo. Paul O'Malley, President Essex Wire Corporation 1601 Wall Street Fort Wayne, Indiana

Dear Paula

Attached is a draft of the terms as I understood them of the deal that you and Steve made Friday in his office. If you agree I would like to turn them over to the lawyers to put them into more elegant and precise language.

Sincerely

Thomas D. Kaufmann Vice President

TDK:meh Attachment cc: Mr. S. A. Furbacher

bcc: Mr. D. L. Farley

LIVENCE 1966

## Terms of Metal Purchase Agreement between Amax Aluminum and Essex Wire

- 1. Essex will install at Intalco a Properzi continuous caster, a coil former and the necessary holding furnaces to support the Properzi.
- 2. Amax will arrange with its partners to lease land at the north side of the cast house on which Essex can build facilities to house the Properzi line. If feasible to place the Properzi in the present cast house Amax will arrange with Intalco to rent the space at a reasonable rate.
- 3. Amax will supply and Essex will purchase a minumum of 15 million pounds of ingot in the form of hot metal in 1967 and a minimum of 18 million pounds for each of the years 1968, 1969, 1970 and 1971, and at Essex's option Amax will supply up to 18 million pounds in 1967 and up to 25 million pounds in the years 1968 through 1971. Further amounts might be arranged upon proper notice.
- Amax will manage the facilities and be responsible for the production of coil in the Properzi facility.
- 5. Essex, however, will be responsible not only for the inst lation of the equipment but also for the training of the personnel and de-bugging of the facility.
- 6. Essex will supply columbium and other master alloys.
- 7. Amax will supply the labor, electrical power and other raw materials for the facilities and will be responsible for day-to-day maintenance.
- For these services Essex will pay Amax 24.05¢ per pound of coil produced fob Intalco.
- This price will rise or fall at the same rate the published price of aluminum ingot rises or falls.

#### Terms of Metal Purchase Agreement between Amax Aluminum and Essex Wire

- Essex will install at intalco a Properzi continuous caster and the necessary furnaces to support the Properzi. This equipment will at all times be the property of Essex.
- 2. Amax will arrange with its partners to lease land next to the Intalco cast house on which Essex can build facilities to house the Properzi line or if feasible to place the Properzi in the present cast house Amax will arrange with its partners to rent the space to Essex at a reasonable rate.
- 3. Amax will supply and Essex will purchase a minimum of 15 million pounds of ingot in the form of hot metal in 1967 and a minimum of 18 million pounds for each of the years 1963, 1969, 1970 and 1971, and at Essex's option Amax will supply up to 18 million pounds in 1967 and up to 25 million pounds in the years 1968 through 1971. After 1971 should Amax and Essex's second smelter be started then this contract will start to be phased out with a minimum of 10 million to a maximum of 15 million pounds in 1972 and a minimum of 5 million and a maximum of 10 million pounds in 1973.
- Amax will manage the Properzi facility and be .esponsible for the production of the Properzi bar stock.
- 5. Essex, however, will be responsible not only for the installation of the equipment but also for the training of the personnel and de-bugging of the facility.
- 6. Essex will supply columbium and other master alloys as required.
- Amax will supply the labor, electrical power and other raw materials for the facilities and will be responsible for day-to-day maintenance.
- For these services Essex will pay Amax 24.05¢ per pound of coiled bar stock produced fob Intalco.
- 9. This price will rise or fall at the same rate the published price of aluminum ingot rises or falls.
- It is expected that delivery of the Properzi and installation would take place at the end of 1966.

TDK 8/5/66

Memorandum from Thomas D. Kaufmann to Mr. D. L. Farley Dated August 15, 1966 Re Essex Wire-Properzi Agreement DETENDANT D. 16,

MEMORANDUM

209 E

To: Mr. D. L. Farley

31

From: Thomas D. Kaufmann

August 15, 1966

Re: Essex Wire - Propersi Agreement

On August 8, 1966 I wrote to Mr. Paul Q' Malley of the Essex Wire Corporation outlining the terms of a deal between Essex and Amax wherein Essex would install a Properzi continuous caster at Intalco and Amax would supply its equipment with hot metal for seven years. The terms of the agreement were attached to the latter, copy of which you received.

Today Mr. Probst, chairman of the board of Essex, telephoned me to say that the terms outlined were acceptable to them and requested that we have our lawyers draw up appropriate contracts.

Could you have someone in the Law Department draw up the necessary papers?

DEFT. EX 9 6

WIT.
DATE 23 W192

TDK:meh

cc: Messre. S. A. Furbacher D. Mayers

Letter to Edward Downing, Esq. from David L. Farley, Jr.,
Assistant General Attorney Dated August 30, 1966
with Carbon Copy to S. A. Furbacher and
T. D. Kaufmann

### 211 E



## AMERICAN METAL CLIMAX, INC.

D-11

ROCKEFELLER CENTER

1270 AVENUE OF THE AMERICAS, NEW YORK 20, N.Y. . PLAZA 7-9700

LAW DEPARTMENT

August 30, 1966

Edward Downing, Esq. General Counsel Essex Wire Corporation 1601 Wall Street Fort Wayne, Indiana

Dear Mr. Downing:

In accordance with our telephone conversation this afternoon, I enclose herewith a copy of a memorandum dated 8/5/66 outlining the terms of the arrangement between Essex and Amax Aluminum, for lease of a Properzi continuous caster and furnaces to Amax and sale of the certain amount of rod produced by such installation to Essex. As I stated, if you could create a first draft of a lease at a nominal rental of the equipment and of a purchase-sale contract, it would be very much appreciated.

I can be reached here at my office or through my secretary during the balance of this week and during the coming Monday and Tuesday. I understand that Mr. Furbacher of our organization and Mr. O'Malley would like to have draft documents by September 14, 1966. If I receive your first drafts before I leave on a trip on Tuesday evening, sentember 6th. I shall try to get my comments and revisions September 6th, I shall try to get my comments and revisions to you.

Please telephone me whenever necessary.

Yours very truly,

David L. Farley, Jr/ Assistant General Attorney

DLF:rw Encl.

cc: Messrs. S.A. Furbacher (ny oldress) T.D. Kaufmann

(nejaddis)

Letter to David L. Farley, Jr., Esquire from Edward D. Downing Dated September 9, 1966



213E

ESSEX WIRE CORPORATION . 1601 WALL STREET . FORT WAYNE, IND. 46804

EDWARD D. DOWNING SECRETARY AND GENERAL COUNSEL PHONE 219-743-492?

3"

Septembir 9, 1966

David L. Farley, Jr., Esquire American Metal Gliman, Inc. 1270 Avenue of the American New York, New York 10020

Door Mr. Farloy:

I wish to schoolledge receipt of your latter dated Anglet 30 welton after your telephone convergation on that date with the indicated. I appeal that my return to the office only in the afternoon of September 2 provented my sending any material to you before you, deposition may below.

I enclose first drafts of the bailment agreement with respect to the Propersi and a purchase and sale agreement with respect to the output of the Propersi. These have not been reviewed by our people, and I would not wish to bind our Company to any position stated in the agreements if a contrary position is taken upon their review here.

You will find that in the purchase and sale agreement we have used 23.72¢ per powel rather than 26.05¢ month and in the menio dated August 5, 1966. Mr. O'Malley has advised that the not price was based on an accumption of freight of 5'.35 /C. It turns out that the freight is \$1.68 /C. The price has according a been reduced by the difference between the freight rates of .33¢ per peach.

I shall look forward to hearing from you with comments on the enclosures.

Sincerely yours,

ESSET WIRE CORPORATION

encl.

Edward D. Downing

cc: Mr. S. A. Furbacher Mr. T. D. Kaufmann

bluard D

Memorandum from Paul Hoboy to T. D. Kaufmann, J. Walker, T. D. Briggs Dated July 26, 1967 Re Properzi Process with Attachments 0 D- 121

Esser

255ck

July 26, 1967

TO:

T. D. Kaufmann

J. Walker

T. D. Briggs

FROM:

P. Hoboy

SUBJECT:

Properzi Process

Steve has asked me to make like an expert on the subject of the Properzi machine and its product. This is a little like the halt leading the blind, but attached is a dissertation on some of the things I know and some of the things we will have to solve in order to participate in this market.

Paul Hoboy

PH/ssc

cc: S. A. Furbacher D. Mayers

DATE 23 Hard 1970
BAR ASSYL RE CRITICIS SCRIPTE

### GET RAL

The Properzi machine is a sort of Hunter continuous casting machine for manufacturing continuous lengths of aluminum rod instead of sheet. It operates in much the same way except that considerably more mechanical work is put into the cast product by the rolling mill at the end of the casting machine than is the case in the Hunter casting process.

The Properzi product, for the manufacturer of wire, is generally produced as a 3/8" rod in continuous coils with weights up to ten tons. The normal commercial coil sizes range from 3-4,000 pounds to 8-10,000 pounds.

### HISTORY

Originally the 3/8" re-draw rod was produced by casting 4" x 4" bar and by means of a wire bar rolling mill reducing the size to the desired diameter. It was generally necessary to anneal the rod at the end of this process to prepare it for the drawing operations to follow.

Since the end product is wire of almost infinite length, it was necessary to weld the small coils, produced by rolling these 4" x 4" bars, to form continuous lengths of rod. To simplify the welding operation, wire bars were made larger and larger. Plants such as the Newark-Ohio operation of Kaiser Aluminum used wire bar as large as 12" x 12" in order to increase the coil size.

The conversion costs in this type of operation have historically been in a magnitude of \$.05 per pound.

As long as the wire industry was satisfied with small coils from 4" x 4" bar, a relatively small investment was needed in rolling equipment to produce the re-draw rod. As the required coil weights increased, the cost of the capital outlay required to get into the re-draw rod producing business became extremely high. The development of a continuous process for producing the product, made available a relatively low cost operation for the mass production of re-draw real.

## TECHNICAL BACKGROUND

Improved technology in the metallurgy and the rolling operations permitted increasing the conductivity of the rolled re-draw rod to permit a gradual increase over the years in the conductivity of the finished wire product from 59 or 60% to 62% and more. (Conductivity percentages are based on annealed pure copper rated at 100%)

1)

The higher conductivity permitted the use of smaller wire sizes for a given high voltage transmission line or conversely reduced the power loss during transmission. providing a real saving to the ultimate customers of the wire.

The various aluminum companies competed actively with one another on this conductivity approach. The first Properze re-draw wire produced compared unfavorably in its conductivity with the rolled product. Consequently much of the first Properzi rod produced was converted into insulated wire for use in low voltage, short distance applications where the cost of power losses was insignificant. Inevitably, however, the attainable quality in the Properzi production advanced and in connection with its very low conversion cost, forced the major aluminum producers into use of the Properzi process to remain competitive.

At this point in time, most if not all of the worlds aluminum producers possess Properzi equipment and would like to forget the conductivity improvement approach. Wire producers who do not have Properzi equipment, however, continue to make demands on the aluminum conductivity that stretch the technical capabilities of the process.

#### PRODUCT REQUIREMENTS

Generally speaking, there are two finished product conductivities and three broad product ranges which constitute the market for re-draw rod from Properzi operations. The three categories are: 62% conductivity bare overhead conductor; 61% bare overhead conductor; and 61% insulated conductor.

Wire manufacturers know that the higher the re-draw rod conductivity is, the easier it is for them to produce the 61 or 62% conductivity for the end product. It is generally also a fact that they require a rod conductivity for all of their production, high enough to permit obtaining the 62% conductivity in the end product. This permits diversification to the 61% conductivity end product when they have manufacturing process problems. When the processes are properly controlled, the 3/8" Properzi re-draw rod must have a conductivity of .3-.5% higher value than the end product requirement.

One of our potential customers has specified a 62.4% conductivity minimum for all tempers of rod he proposed to purchase. To obtain this value without unduly high rejection rates at the Properzi machine, at least one major aluminum producer specifies a .04 Si aluminum average. Some heats of aluminum up to .05Si are permitted. The Fe content has to be closely controlled in a range of 2 to 2-1/2 times that of the Si. This requires adding the Fe to the metal prior to Properzi casting. For 62.4% Properzi rod conductivity with .04Si, the usual Fe content is .09. To illustrate results obtained by Nichola Aluminum, using typical Intalco material, a copy of their test results is attached.

For the production of Properzi rod intended for the manufacture of 61% conductivity, 62% re-draw rod is normally required. Even this conductivity requires the use of aluminum with a Si content of .05 average. With this silicon content, the Fe content would be approximately .12.

The rod is covered by ASTM Spec. B-233-64 The wire is covered by ASTM Spec. B-230-60

Copies of those specifications have been ordered.

#### SHIPPING METHOD

Properzi coils are normally shipped in railroad cars. They are coiled in a vertical position (the axis of the coil is horizontal) and are kept in this vertical position throughout the handling and shipping process. When shipping two or three ton coils, approximately 22 coils are loaded per railroad car and set on 6' x 6' or 8' x 8' timbers which have been cut forming a nesting surface for the outside of the coils. Inflated bags are placed above the coils to hold them rigid in the shipping process.

#### PRODUCTION CAPACITY

The machine to be installed at Intalco is a Model 8 machine. The capacity will be in the order of 14,500 pounds per hour and will produce on a monthly basis about 80% of the calculated capacity. This product will require attaining familiarity with the technical and metallurgical idiosyncrasies of this machine and this process. The operation of the machine and equipment will present very few problems. However, establishing the proper operating temperatures, speeds, cooling rates, chemical composition of the aluminum and other technical aspects and requirements will require a great deal of attention. We would be well advised to find metallurgical talent with experience on this particular equipment.

PH/ssc 7/26/67 (160) (17

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Inter-Office Memorandum from T. Briggs to J. Loyer Dated March 8, 1968 Re Properzi Conditions of Acceptance



SUBJECT

# INTALCO ALUMINUM CORPORATION

INVER-OFFICE ESMORARDUM

DEFENDANT TO - 1

130 77 102 10 DATE 23

DATE

March 8, 1968

COPY TO

C. Kilburn, J. Cameron, R. Ferrie, S. Cheatham, J. Cundiff, E. Pfieffer,

I. Macdonald, C. Li.

R. Gustafson

PROPERZI CONDITIONS OF ACCEPTANCE

Intalco maintenance, purchasing and Cast House people met today with Mr. Kilburn. We covered the in-plant items on the 1/8/68 check list re conditions of accepting the Properzi from Essex. Most of the items have been resolved except as noted below:

- Drawings have been submitted by Essex and appear complete except for Off coiler. Kilburn has these prints and will send them to Cheatham for review.
- Equipment list electrical submitted by Essex. Essex has written Properzi for mechanical list and will submit it when received. Cheatham indicated that we would probably accept machine conditionally until full lists are received since it will probably take many months to receive the list from Properzi.
- Spare parts mechanical spare parts as recommended by Properzi have been received and appear satisfactory. Kilburn has ordered vendor recommended lub, electrical and coiler spare parts, but they have not arrived as yet. Electrice! list contains a few omissions according to Pfieffer. The lub list appears complete per Lunde. The coiler lists will be submitted shortly by Essex and will then be reviewed by our maintenance people.
- 4. Installation and operating points -
  - Alignment of casting wheel Kilburn has written to Properzi about 25° angle but hasn't received word as yet. He authorized Intalco to write Paul Rarford of Nichols to get his opinion of the 25° vs 10-15° angle. Macdonald will write Rarford upon reviewing letter with Cheatham.
  - b. Coil installation and operability evaluation will be made this week.
  - c. Ground fault monitoring has been installed but no positive fault protection has been provided between transformer primary power and load side of the second breaker. Pfieffer and Cheatham say this is not ideal and could cause potentially extensive damage re down-stream burnouts. It will cost \$25,600 to \$30,000 to correct this problem. It was agreed that AMX and yourself should be made aware of the fact with final decision resting there.



# INTALCO ALUMINUM CORPORATION

INTER-OFFICE MEMORANDUM

223 E

TO J. Loyer DATE March 8, 1968

COPY TO

FROM T. Briggs

SUBJECT PROPERZI CONDITIONS OF ACCEPTANCE (Cont'd -- Page Two)

- d. New Nichols molds have been ordered and are promised for April 1. These thick wall molds are different from the Properzi light molds and will be evaluated upon receipt and use.
- e. Quality Control Equipment Gustafson has submitted an A/R for testing equipment which Essex has agreed to purchase (if not already on hand). Gus awaits approval.
- f. Operating procedures Kilburn and Li are currently preparing the instructions. Li is responsible for acceptance with Macdonald's approval.
- g. QC standards Gustafson is satisfied with the quality standards (ASTM) as understood. He wants to see what properties the coiler will contribute and then will give his final approval.

Kilburn's major gripes with Intalco include a somewhat sluggish maintenance pace and the inability to get operating cost data from the Controller.

The commercial and AMAX Essex negotiated points of acceptance were obviously not discussed.

TDB/sav

Dated, Signed Copy of Agreement Between American Metal Climax, Inc. and The Okonite Company ONO HITE CONTINCT

D-136

225E - -/

- CMACO

American Metal Climax, Inc., a New York Corporation 1270 Avenue of the Americas New York, New York 10020

The Okonite Company, 220 Passaic Street Passaic, New Jersey

Seller agrees to sell and deliver to Buyer and Buyer agrees to purchase and receive from the Seller the below-described merchandise on the terms and conditions herein provided.

ITEM:

Aluminum 3/8" electrical conductor grade coiled redraw rod (hereinafter referred to as Product).

SPECIFICATION GRADE:

Elec rical Conductor, per applicable ASTM specifications and standards as specified in Exhibit I.

QUANTITY:

All of Buyer's requirements during the years 1968 and thereafter unless earlier notice shall be given as provided in Section 8 hereof, such requirements being estimated by Buyer as follows:

Year	<u>v</u>	Million Pounds					
1968			(3)	/			
1969			20 /				
1970			25				
1971			31				
1972			35				
		7	20				

with the right of Buyer to call for up to 100% in excess of the estimated quantity for any calendar year by giving notice of such increased requirements to Seller at least 6 months before the increased delivery rate begins. Giving of such notice by Buyer shall be deemed a commitment on Buyer's part to order within minus 10% of the total amount so requested during the 12 months following the beginning of the increased delivery rate.

Vigner 100

SHIPMENT:

Buyer shall space and allocate its requirements and requests for shipment so as to divide the annual total in any year into twelve (12) equal (plus or minus 10%) monthly shipments. At least 30 days before the beginning of each month Buyer shall submit a written order to Seller specifying the quantity and shipping dates of Product it desires to purchase for the month.

DELT. 136
WIT. 136
WIT. 1470 FJ
DATE 24 Harch1470 FJ
BAR ASS'N, REPORTING SERVICE

PRICE: 121.8

26.8¢ per pound of Product, FOB Buyer's plant continental U.S.A., based on a price of aluminum ingot of 25.0¢ per pound, said price to be adjusted apward or downward proportionately as the published price of aluminum ingot (99.5% minimum average purity), as published in American Metal Market varies from 25.0¢ per pound.

226 E

Net cash payable thirty (30) days after shipment.

FOB Buyer's plant continental U.S.A.

Title to merchandise passes woon delivery.

CONDITIONS OF SALE:

DELIVERY:

TITLE:

1. Neither Bujer nor Seller shall be limbe for any delay or failure in performance arising from strikes, work stoppages or other labor difficulties, labor shortage, fire, flood, war, breakdowns or failure of plant machinery or equipment, delays in or lack of transportation, governmental regulations or requirements or priorities or allocations, delays of suppliers, or any other cause beyond the reasonable control of Buyer or Seller. In the event of delay or failure of performance not excused in accordance with the preceding sentence, Seller's liability shall not exceed the excess costs, if any, reasonably incurred by Buyer in procuring the undelivered portion of the material ordered from other sources. In no event shall Seller be liable for any consequential, special or contingent damages.

In the event Seller cannot, for the aforesaid reasons beyond its reasonable control, meet Buyer's requirements from Intalco or other Seller's source, it will use its best efforts to attempt to obtain alternative sources of supply for the Buyer's requirements.

- 2. All taxes, excises and other like charges payable for or on account of any sale or delivery other than income taxes hereunder shall be the sole responsibility of Buyer.
- 3. Seller warrants only that the merchandise shall conform to the standards above provided and makes no other warranty or representation expressed or implied. Any claim that merchandise delivered hereunder does not so conform must be given by Payer to Seller within thirty (30) days after delivery. AMAX' sole liability thereunder shall be for replacement, without expense to Okonite, of any merchandise not conforming to such standards.

227 E

specification set for h above,

AMAX makes no warranty of suitability of the merchandise for any particular purpose and assumes no responsibility foff the loss of profits or consequential or secondary damages or the laborate damages of any other nature whatsoever.

- 4. The failure of either party to enforce its rights under any provision of this Agreement shall in no way be construed as a waiver of such provision nor shall it in anywise affect the validity of this Agreement or of any part thereof. No waiver of any breach of this Agreement shall be held to be a waiver of any other or subsequent breach.
- 5. Neither this Agreement nor any part thereof may be amended, altered, revoked, or otherwise modified in any manner except by an instrument in writing signed by duly authorized officers or representatives of both parties.
- 6. The Buyer may not assign this Agreement without the prior written consent of Seller. Seller reserves the right to have its obligations hereunder performed, wholly or in any part, by any of its subsidiaries or affiliates. Seller also may assign its rights hereunder to such subsidiary or affiliate without the prior consent of Buyer.
- 7. All notices required or permitted to be given under this Agreement shall be in writing. Such notices shall be sent by mail with return receipt requested to the party entitled to receive such notice at the address shown below or to such other address as may be supplied for the purpose of such notices.

Okonite Company 220 Passaic Street Passaic, New Jersey Attention: Tice Woodcock

AMAX Aluminum Company
35 Mason Street
Greenwich, Connecticut
Attention: Thomas D. Kaufmann. 42 0

8. This Agreement shall continue in effect for 5 years from the date hereof provided with an option for renewal for 5 years under the same terms and conditions; however, that either party may give the other notice of earlier termination as of January 1 of any calendar year after 1970, by giving the other written notice to that effect at least 180 days before the end of the then current calendar year. Such notice shall be sent by registered mail.

and so

85/1/21

9. This Agreement constitutes the entire understanding between the parties hereto with respect to the subject matter thereof and there are no terms, covenants, conditions, representations or agreements, oral or written, of any nature whatsoever concerning this subject matter other than horse herein contained.

10. The interpretation and performance of this Agreement

shall be governed by the law of the State of New York.

Agreement to be executed by their officers there may daily authorized on the 20th day of December 1957.

SELLER: AN COROLAN MEMAL CLIMAX, INC.

Attest:

action for Janes

By Con Condent

BUYER: THE OKONITE COMPANY

A-1251.

ad Wayse

By / D. Willey

EXHIBIT I

229 E

Standard Specification for ALUMINUM ROLLED RODS FOR ELECTRICAL PURPOSES
ASTA Designation: B 223-64

ASTM Designation: B 233-64 Adopted, 1949; Revised, 1952, 1954, 1955, 1950, 1951, 1964

Type EC # 12 ger Down Kent

Handwritten Notes Concerning Essex's Claim of Maintenance Delay with Three Pages of Description

1 1/8/68 Gy 1 231E

# Concerning Essex's Claim of Meintenance Dely.

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- 3 There are 11 outstanding work represts. 3 immediate and 8 normals.
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- D all elect cal work were being healled immediately
- to myself or Jim Wir and by Ever people which is of emergency type had been refused.



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Letter from J. M. Morris to Milton H. Nichols Dated August 29, 1967 Re Equipment, Copy to A. Douglas Hannah and J. B. Russell

Dayt Ext. # 247, 5/6/20, 4

August 29, 1967

Mr. Milton H. Nichols
c/o Giddings & Lewis Export Sales Ltd.
Welsh Harp, Edgware Road
London, N. W. 2, England

Dear Mitt

Thank you very much for your letter of August 25, 1957. It appears at long last that they are shipping some equipment, and I am tickled to death as the customers were just getting impossible to even talk to. To add final insult to injury on the Essex wire equipment, they had agreed to ship the casting machine to fidw York and then overland to Seathle because they were so late in delivery and also agreed to pick up the extra cost of freight. As Murphy's law would have it, they did not do that but instead shipped by water to Seattle. The mill that they shipped the first part of August had not arrived in Seattle by the end of last week, so you can see Essex's concern. Alcours faring much better and has received the mill and has it in place. The casting machine that was shipped on August 23 is in Houston today, so it appears that Alcou will beat Essex to production.

In a discussion with Donini regarding the mold design and spare molds, he tells me now that the molds that are shipped with the equipment are experimental and they really haven't finalized on the mold design. This is going to be great.

I am going to have Jim Russell full-time at Essex and/or Aloca until we work out the problems and get them running. In the meantime, I am going to see for myself what Proporti has actually done and accomplished on the casting wheels. I plan to be in Milano September 25. Pattye, the children and I are taking a vacation starting September 5 and I am attaching my itinerary in case you have need to reach me for anything.

Donint thinks I should accompany him to Russia to see the easting machine on copper in operation but I seriously question the value of going there and probably won't make up my mind until I talk further with Donini in Alilano.

I want to get back as soon as I can since we have Labor negotiations coming up this fail and I want to be here.

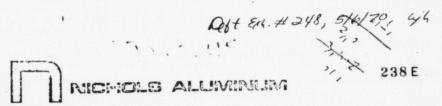
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IMMisch cc: A. Dougles Hennah

I. B. Russell

I. M. Morris

Letter from J. B. Russell to Charles V. Kilburn Dated September 11, 1967 Re Properzi No. 8— Ring Molds, Copy to Earl Gottschalk and J. M. Morris



September 11, 1967

Mr. Charles V. Kilburn
Intalco Aluminum Corporation
Box 937
Ferndale, Washington 94249

Dear Charlie:

This is to confirm that with the initial shipment of the Properzi No. 8 casting machine you will receive two types of ring molds. One is of the conventional pentagonal shape, the other trapezoidal. The latter will be mounted on the casting machine.

Continuus was not able to fully establish a preference between these two designs, based on the test work at the factory. In effect, Continuus is asking you to assist in the evaluation of the molds. We regret this inconvenience, but we assume Continuus had no alternative.

You have already been advised that the spare ring molds on your order are being delivered at no charge to you.

Yours sincerely,

Ch Spierre

J. B. Russell
Chief Metallurgical Engineer

TBR:cb

Mr. J. M. Morris

Charlie - alcos and free as in the

Letter from Mr. Properzi to James E. Russell Dated December 5, 1967 Re Report on Present Progress of Plants, Ring Molds at General Cable CONTINUES

COSTRUZIONE ESERCIZIO LAMINATOI

Società per Azioni - Capitale versato L. 400.003.000

Sede Sociele MILANO - Via Cosimo del Fante 10 Tel. 8.431.333 - 834.876 - 8.492.418 Indirezzo selegia, CUNTINUUS - MILANO Deft Ext. # 251, 5/6/70, 6,4 240 E

Milano December 5, 1967

Direzione - Uffich VIa Cosimo del Fante, 10 Telefani 8.431.363 834.876 - 8.432.418

RIFERIMENTI NA

PR/ss

Mr. James B. Russell, Chief Metallurgist Nichols Wire & Aluminum Company 1725 Rockingham Nond Davenport, Iowa, U.S.A.

De r Mr. Russell,

Thank you very much for the exhaustive report on the present progress of the three plants.

In my opinion, the deformation of the ring woulds at General Cable is due to the cooling of the groove after the point where the cast bar leaves the ring mould.

Should the cooling of the ring be more intensive in the portion where the cast bar is still held by the groove, it would not be necessary to cool the ring beyond the separation point, after which the groove is empty. The deformations are caused by the contraction of the overall radius of the ring, for which reason the inside walls of the groove are attracted towards the wheel center and the mold lips must compulsorily bend inwards causing progressive buckling, in spite of the steel support.

The cooling arrangement must have a different setting by each different speed of the wheel, since it is actually a matter of a heat transfers through walls as a function of the lengths of time available for cooling, which condition the ring temperature at the point of detachment of the cast bar.

The sketches annexed to my instructions to the different customers were related to a 3 rpm production, operating by a water temperature of 54°F as we have it available here.

In some experimentations of ours we found out that the mold had a tendency to shrink (to contract towards the center of the wheel), while in other experimentations we had exactly the opposite result. This fact induced me to decide for this new system.

Mr. James B. Russell, Nichols Wire & Aluminum, Davenport, IOWA, U.S.A.

I hope that, after some practice, it will be possible to control the cooling conditions by relating them to the deformations observed.

I also hope to be able to supply ring moulds having a higher resistance to softening, using alloys which shall not ,however, considerably reduce thermal conductivity.

I would, of course, appreciate, if you could continue to follow closely these very interesting developments, both from a technical and a commercial point of view, in this first operation stage of the Model 8 machine.

Thank you for your encouraging co-operation and I would ask you to keep your fingers crossed for some time..

With best regards, I remain

Sincerely,

1. Properzi-

Letter from J. B. Russell to Ilario Properzi Dated December 14, 1967 Re Casting Dept Exh. # 250, \$6/70, 18

dc: \*J. M. Morris
J. D. Murphy

Enrico Donini M.H.Nichols

K. Raiford 243 E

MICHOLS ALUMINUM

December 14, 1967

Mr. Ilario Properzi S. p. A. Continuus Via Cosimo del Fante 10 20122 Milano, Italy

Dear Mr. Properzi:

I refer to your letters of December 5 and 6.

lassumed the casting practice and sketches which you released to our customers a few weeks ago pertained to a casting rate of 3 RPM or higher, and all have been advised accordingly. Your practice called for all sprays off on the inside over the first 60° of arc. At 3 RPM the wheel traverses this arc in 3-1/3 sec, or 3 sec, at 3.2 RPM. I believe 60° or arc amounts to 17 or 18 sets of spray nozzles on the inside. If the same delay time applies at 2 RPM, then 10 or 11 sets would be off to prevent overheating of the thin mold. Alcoa operated with 8 to 10 nozzles off in the 2.0 - 2.3 RPM range and managed to get a fairly good casting. General Cable, however, was not able to produce what they considered to be a good casting and nillpole with this practice.

\* Essex is operating at 1.8 RPM with the top 6 or 7 sprays off on the inside front and only one set off on the belt. Seven or eight sets are off at the rear below 9 e'clock, which extends below the point where the casting leaves the wheel. But even with this practice, a ring mold recently buckled, and you will note that Essex is cooling higher on the wheel on the hot side than anyone

Recently, Alcoa has been operating at 2.8/2.9 RPM for short periods and Mr. Williams there has tried using "no sprays" or "2 of 3 sprays" on at the rear side of the wheel above the point where the casting leaves the wheel. Nevertheless, the sides of the mold always ran substantially hotter than the bottom, and the top of the mold was still hotter. Your experimental wheel with the keyed ring mold was perticularly hot along the top lips of the mold (300 to 320°), or about 20 to 30° hotter than the previous mold (the one which buckled inward at the sides at 12 locations). I have not heard of a mold bulging outward.

We fully understand your desire to have our customers exercise more patience on this whole ring mold and cooling problem on the No. 8 machine, but I fear our customers are finding it too costly to be patient any longer, hence my lengthy letter to you of yesterday. We must get them into production, AND SOON!! Alcoa is ordering six ring mold blanks. Though nothing was said directly to me, we strongly suspect that Alcoa is already proceeding with a design of their own casting wheel and mold.

General Cable is obtaining good results with the Masrock spouts. Their main trouble is with mechanical damage in handling and cleaning. The wall is surprisingly thin and the refractory is quite prittle. If the exit end of the spout gets chipped, General Cable inserts a short tube of graphite to obtain optimum usage. I might add the panic button of the spout flow control cannot be used with a ceramic spout, as the metering plug, in dropping, breaks the top of the spout. At the present time General Cable prefers to use coated steel for the metering pin. I gathered they had trouble with Masrock pins, mainly breakage at the top, but this could have been caused by the method of mounting the pin in the adaptor. This should not be a rigid fit, even with steel pins. As a star by material for spouts, exidized titanium tubing appears to be best.

Peanut oil was first used on the mold and belt at General Cable because that was the only of on hand. Actually, I believe sperm oil, rape seed oil, caster oil or lard oil would serve equally as well. We have long used Dow Silicone No. 710-G on the mold = 1 acetelyne carbon smut on the belt, as has Kaiser. The combination works very well. The No. 710-G is listed in our old Bulletin No. 2 of May, 1961. It's too early to tell if Dow 444 Grease is better than 710-G, but we favor the latter over the above-mentioned oils.

Reverting to your present casting wheel and mold design, I would tell you that we had no pre-conceived ideas about the "pros" or "cons" of using thin-walled molds. There's always room for improvement in most any piece of equipment, and your present wheel and mold system has some attractive features. But the facts of the matter are it is not standing up on a production basis, or for that matter, a semi-production basis. Furthermore, if the system is made operable under certain and strictly controlled conditions, there are indications that the system might be too sensitive to the various process variables to permit adequate control on a week by week production basis by regular production ps sonnel.

Be that as it may, I am not suggesting you abandon your basic concept at this time. What I and my colleagues here at Nichols are suggesting is that you proceed immediately with the design and construction of a wheel and cooling system which has already proved satisfactory for production use. Later on, as time permits, you can make the modifications and refinements to your present system which you now consider necessary or appropriate. When this work is done, and after you have tested the system insofar as you are able to test it in your shop. I believe we could strike a deal with one of our No. 8 customers whereby the system could be tried on their equipment. A customer is always more willing to experiment in order to improve something if he knows he has a production process that will work at least reasonably well, than if he doesn't. This is only logical, though I admit it sometimes takes some arm twisting to overcome the conservative thinking of some production people.

We look forward to receiving your comments on this and my previous letter. Yours sincerely, J. B. Russell JBR:cb P. S. Even with an alloy mold, I would suggest you increase wall thickness by 1-1/2 to 2 mm. This still constitutes a "thin wall" mold. JBR

Mr. Ilario Properzi

245 E December 14, 1967

Letter from James C. Dunstan to J. M. Morris Dated June 28, 1968 Re Settlement

June 28, 1968

Mr. J. M. Morris Nichols Aluminum Company P. O. Box 3808 Davenport, Iowa 52808

Dear Mr. Morris:

Thank you for your letter of June 25.

Essex would accept as a satisfactory settlement the releasing of Continuus, O.T.T. and Nichols from any claims arising from the Properzi operation at Bellingham, provided they agreed to the cancellation of the pending orders and returned the downpayments we have made to each of them.

If this is acceptable to the two principals, please advise and we will send you a letter of release.

Very truly yours,

ESSEX WIRE CORPORATION Wire and Cable Division

James C. Dunstan Vice President and General Manager

> D-276 (retyped copy)

Memorandum from J. C. Dunstan to E. D. Downing Dated October 28, 1968 Re Twin Reel Coiler FROM J. C. Dunstan

LOCATION Fort Wayne

C 249 E
PJ. C. Dunstan

DATE October 28, 1968

To avoid verbal order.

Regarding our phone conversation today, here are the facts as I understand them.

- We have purchased one twin reel coiler with recommended set of spares from Office Technique des Trefiles on our purchase order No. 90-1024.
- We have tried to cancel the order and obtain our money paid to them, which they have agreed to refund only upon subsequent sale of the equipment.
- The equipment has been placed in a bonded warehouse in our name. For details of this arrangement and status of payment, see Jack Prendergast who has handled this part of the transaction.
- 4. By mutual agreement between O.T.T., Nichols Aluminum (U. S. sales representative), and Essex Wire, the equipment was to be ours until sold, with every effort being made to sell it for us at the first opportunity.
- A sale is now available and we are to submit a letter to authorize the sale and delivery of this equipment by O.T.T.
- 6. Upon receipt, the sale will be consummated and our money returned to us.

Please prepare a legally constructed letter to O.T.T. with copy to Nichols Aluminum for Jim Dunstan to confirm before mailing.

C. V. Kilburn

6 2- 2. in

/ds

Letter from Dunstan to Morris Dated October 14, 1968 Re Prepayment Refund to Essex for Second Properzi Model 8







251 E

PLUJER & COMMUNICATION CABLE DIVISION 2601 SOUTH ADAMS - MARION, INDIANA 46952 PHONE 317-664-6211 - TWX 317-6

October 14, 1968

Nichols Aluminum Company 1725 Rockingham Road P. O. Box 3808 Davenport, Iowa 52808

Attention: Mr. James M. Morris President

#### Gentlemen:

In accordance with our conversations, S.p.A. Continuus is to forward to Essex the prepayment Essex made for the second Properzi Model 8 Casting Machine. This prepayment was for \$184,000, and all but \$8,000 is to be returned. The \$8,000 covers a transformer which is to be shipped at the expense of Essex from Milano, Italy, to Essex Wire Corporation at Boonville, Indiana.

Essex will receive this refund of \$176,800 (plus the transformer) in final settlement of all of its claims concerning both Properzi machines (Quotation Nos. 803 and 813), thereby releasing and discharging S.p.A. Continuus and Nichols from any responsibility for any costs or problems Essex may have had in connection with either machine, including those claimed to have occurred at the Bellingham installation and any claim that Continuus or Nichols warranted a production of 14,000 pounds per hour by the first machine.

Nichols and Continuus will continue to supply Essex customary technical information and assistance from time to time on the Boonville installation but, having in their opinion exhausted all reasonable allowances for furnishing such items, will invoice for prompt payment the reasonable costs incurred in rendering such assistance to Essex.

Nichols Aluminum Company Page Two October 14, 1968

If you and Continuus are in full agreement with the above, please sign and have Continuus sign one of the copies and return it to J. C. Dunstan at Marion. The original you may keep for your files and the second copy would be for Continuus.

Very truly yours,

ESSEX WIRE CORPORATION

Power & Communication Cable Division

James C. Dunstan Vice President and General Manager

We agree to the foregoing this

1st day of Neventer, 1968.

Nichols Aluminum Company

Immorris prespect

We agree to the foregoing this

20th day of October, 1968.

S.p.A. Continuus

by ( DR. E. Donini, Sales Manager )

Memorandum from Dennis Arrouet to T. D. Kaufmann Dated February 5, 1968 Re Properzi at Intalco

D-319

#### MEMORANDUM

254 E

To: T. D. Kaufmann

February 5, 1968

Re: Properzi at Intalco

Mr. J. C. Dunstan's letter to you concerning Properzi costs for account of Essex has been reviewed and we submit the following comments on accounting in the same sequence as stated in the Essex Wire letter:

- (1) No question.
- (2) No question.
- (3) Maintenance labor of \$9,009.00 was determined from maintenance tickets (Each ticket provides exact detail on the job performed, etc.) for the Properzi during the period in question. Presumably the Essex people in Bellingham have reviewed the costs and reimbursement should be expected. On the question of contract language, our lawyer who wrote the contract feels there is no doubt that the responsibility for the maintenance costs is Essex'.
- (4) Not applicable.
- (5) No question.
- (6) Essex' point that sufficient supervision has been provided, two Intalco direct supervisors plus one and one-half Essex supervisors for supervision of six direct labor people, is well taken. An additional charge for \$1,878.95 for indirect supervision is unwarranted and they should not pay this cost.
- (7) The major argument concerns how fixed costs of \$228,000 for the Cast House and the new addition were allocated to the Properzi. If allocation is made on the basis of square footage in the Cast House and the new addition the proportion would be 10.15%, (13,696 square feet for Properzi divided by 134,906 square feet for total cast house and new addition.) and the cost would be \$23,142 (10.15% x \$228,000.) To be fair Intalco chose a lesser amount based on value of the capital cost of the building (not equipment) involved in the installation compared to the total cost of the Cast House and the new addition. Intalco estimates that the cost of that part of the building occupied by the Properzi is \$425,000 or 8.75% (vs \$493,290 @ 10.15%) out of the total cost of the Cast House building and new addition of \$4.86 million. It is suggested the 8.75% allocation factor be used and Essex reimburse \$19,950.

13100 14.860,000

Some

(8) Essex' argument that the contract quantities of 15-18,000,000 pounds should be used for allocation purposes appears inappropriate since Essex did not purchase contract quantities in 1967. Also the contract did not limit Essex use of the Properzi to 18,000,000 pounds in 1967. Capacity seems to be the best criterion here and when capacity becomes available to others than Essex after the break-in period, we anticipate production for the Amax account will be charged a proportionate share of the assigned Properzi general maintenance cost. However, the amount in dispute here seems small and it is therefore suggested Essex reimburse \$3,777.98.

(9) Adding up all the above, Essex' charge for the ten weeks would be:

	\$12,781.94		
	8,086.06		
	10, 051.31		
١.	NA		
	\$30, 919.31		
ndi	rect Costs		
5.	500.00		
5. 6.	500.00		
Indi 5. 6. 7.	500.00 -0- 19,550.00		
5. 6.	500.00		
5. 6. 7.	500.00 -0- 19,550.00	<b>\$</b> 55, 147, 29.	

117-

Dennis Arrouet

DA:ph

Defendant's Calculation of Actual Cost to Essex of Intalco Rod Introduced at Trial

## Ex. 1-102

(18,000,000) (6 yrs) = 108,000,000

Less Rad Delivered 2,100,000

Future Shyments 105,900,000

Total Amax Invoices 660,000

Ex. P-103

Essex's Co.+ Per Pound 2, 100,000 (1,787,925 15 6.304)

T-Ingot Selling Price

# 0,221 (1-102)

Actual Concersion Cost

M C. C 94 (A)

M 0.715

(1,789,925 is \$C.148) Estimate Conversion Cost (Ex. D-30) C.CCEGY (B)

Compare A (actual) to B (estimated) ??

\* Figure wrong -- should be 1,789, 925 lbs (Ex. DISS to DIGO P-48 )

\*\* Subtraction living

D-726

# Exhibit D-729 Defendant's Calculation of Plaintiff's Damages

(if any) Introduced at Trial

1

E	ssex 1948-1973	Okonite 1968-1972
18,000,000 ×6 Rad Deliveries	1, 729, 925 16s 1,06,210,075 16s	120,000,000 lbs
24.36 4	Contract Price	26.86 4
	Freight	1.40 +
	Rent	0,38 4
24,364	NET	.25,02 €
19.15 (16.15 + 3.00)	Cost	19.15
5,21	Net Margin	5.87
#5,533,ccc	Profit	\$ 7,044,000
	Total Protit K	,
	# 12,577,497	(A)

T- Ingot

22.1 4 Selling Price

5/68

Cost

Margin

(226, 210,000×5.9) = "15, 545,800

A 12,577,497 B 13, 345, 200

# 788, 303

259 E

16.15

5.9 4

1729

Exhibit D-730
Chart of Defendant's Damager Introduced at Trial

## American Metal Climax v. Essex International 261 E

### CHART OF ESSEX'S DAMAGES

Con	struction Costs at Bellingham		Amount	D's Exhibits
1.	Bechtel Corporation - costs for construction of founda- tion for Properation casting machine		\$ 51,025.00	D 400
2.	Bechtel fee		5,100.00	D 400
3.	Snelson, Inc Labor and material to install equipment		87,046.99	D 402-447 D 449-467
4.	J. W. Copeland Yards		122.40	D 448
5.	Preight Charges Incurred (Installation)		1,953.27	D 468-484
		TOTAL	\$145,247.66	
Bel	Insportation Costs from lingham to Boonville (Ind.) Coldwater (Mich.)	TOTAL	17,522.63	D 514-538
Los	s On Refractory Linings	TOTAL	84,700.00	P 46
	orage of the Properzi at	TOTAL	1,072.75	D 510
Tre	avel Expenses etc. of		Amount	D's Exhibits
H. Rol Pau	erles V. Kilburn and Richard Publow Dert Kittsmiller Unknown al W. O'Malley Unknown mes C. Dunstan Unknown	TOTAL	\$ 7,353.92	D 541-546, D 552-554, D 579-588, D 591-626, D 629-633, D 636-676, D 681-682, D 685-688, D 691-692
		TOTAL	\$255,896.96	

Exhibit D-735

Extract from Year Book of the American Bureau of Metal Statistics

# YEAR BOOK 263 735

OF THE

# American Bureau of Metal Statistics

Fifty-Second Annual Issue for the year 1972

Issued June 1973

50 BROADWAY NEW YORK

#### AMERICAN BUREAU OF METAL STATISTICS

#### 50 BROADWAY NEW YORK, N. Y. 10004

Cable Address: Amburostat New York

264 E

#### EXECUTIVE COMMITTEE

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H. Fasting, Director

Robert Clock, Statistician John C. Keith, Statistician Assistant Statisticians Rosemary Mollica Peter H. Shordt

Auto Anich Lage

A nonprofit statistical bureau supported by the most important producers of copper, lead and zine in United States, Canada, Mexico and Peru as follows:

the state of the s

American Metal Climax, Inc.
American Smelting and Refining Company (Asarco)
The Anaconda Company
The Bunker Hill Company
Cereo Corp.
Cities Service Company (Miami Copper Operations)
(Copperhill Operations)
Comirce Ltd.
Copper Range Co.
Cyprus Mines Corporation
Duva' Corporation
Falconbridge Nickel Mines Limited
Heela Mining Company

Hudson Bay Mining and Smelting Co.
The International Nickel Co.
Kennecott Copper Corp.
Magna Copper Co. (incl. San Manuel Division)
National Zinc Company, Inc.
New Jersey Zinc Co.
Noranda Mines Ltd.
Phelpa Dodge Corp.
Pima Mining Company
St. Joe Minerals Corporation
Texasguif, Inc.
UV Industries, Inc.
White Pine Copper Co.

## MONTHLY AVERAGE PRICES OF ALUMINUM -NEW YORK (c)

(Cents per pound)

Month	1966	1967	1968	1969	1970	1971	1973
anuary	24.500	24 738	25.000	26.455	28.000	29.000	29,000
February	24.500	75 COC	25,000	27.000	28.000	29.000	29 000
March	24.500	15.000	25.000	27.000	28.000	29.000	29,000
writ	24.500	25 000	25.000	27.000	28.591	29.000	29,000
May	24.500	25,000	25.000	27.000	29.000	29.000	25, 909
ape	24.500	25.000	~6.000	27.000	29.00	29.000	25.000
luly	24.500	25.000	000	27.000	29.000	29.000	25.000
August	24.500	25.00	OND .	27.000	29.000	29.000	25,000
September	24.500	25.00	1600	27.000	29.000	29.000	25.000
October	24.500	25.000	000	27.652	29.000	29.000	25,000
November	24.500	25.000	26.000	28,000	29.000	29.000	25,000
December	24.500	25. 00	26.000	28.000	29.000	29 100	2: . 0
Year	24.500	24.978	25.583	27.178	28.716	29 900	26.409

<sup>(</sup>a) Unalloyed ingot, 99.5%, prices are as recorded by Metals Week, delivered United States.

### MONTHLY CANADIAN PRICE AVERAGES FOR ALUMINUM (a)

(United States Currency, cents per pound)

Month	1966	1967	1968	1969	1970	1971	1972
	24.19	24.37	24.53	26.14	27.49	29.16	29.33
February	****	24.52	24.43	26.52	27.49	29.28	29.36
March	04.15	24.49	24.37	26.47	27.50	29.31	29.54
		24.48	24 43	26 48	27 50	29.27	29 63
		24.49	24.53	26.46	27.49	29.25	(b)
		24.52	25.39	26.40	28.40	24.88	(h)
July	1 0- 10	24.58	25.53	26 37	28.58	28. NN	(h)
	04 10	24 63	25 61	26 43	2N. NN	29.11	(h)
August September		24 64	25.63	26.43	29.63	29.12	(10)
October	n	24.68	25.63	26 N2	28. KN	29.36	(h)
	24 02	24.65	25 63	27.42	28.91	29.38	(h)
November	24.00	24.53	25 62	27.46	28 99	29.52	(b)
Yearly Average	24.13	24.54	25.12	26.66	28.26	29.21	(h)

(a) As recorded by The Northern Miner. Prices are Lo.b. delivered basis Canadian points. Aluminum Ingot 99.5%. (b) Canadian aluminum producers stopped quoting a 'published' price effective May 8, 1972.

## MONTHLY AVERAGE ALUMINUM PRICES-UNITED KINGDOM (a)

(U.S. dollars 99.5% ingots)

Month	Side South feeter	1967 long tons	1968 long tons	1969 long tous	1970(b) long/metrie	1971 metric tons	1972 metric tons
	549.564	517 (886	550,879	580,459	616, 101	618.772	661.133
anuary	549 290	547 644	550.902	591 472	617 205	621 858	661,861
relatuary .	547 XV3	548 075	548.730	591.516	617.487	622 1790	665.521
March.	17,506	548 643	549.210	591,893	613.363	621.884	663,513
April	147 201	548, 192	546.329	590, 260	618.232	622.090	599 NOT
May	546 S01	517 075	563 824	591 002	616 688	622,090	565, 202
une	46 GIS	516.311	568 N20	591, 225	614.N62	622 IKM	5:17 N34
uly	5 605	545.919	569.082	589,963	614.116	626.179	539.014
August	516.703	545,605	568 201	589,612	613 499	635, 130	537.020
September	547.154	545 507	568 749	597 966	611.039	640.582	538.444
November	547.056	550 660	567,820	615.019	611 785	611.277	540,615
December	546.NGO	550.239	567.440	615.305	614.862	619.842	539.304
Vestly Average	647.428	849.067	660.268	693.818	613.029(*)	628.648	586.488

<sup>(</sup>a) As reported by the Aluminum Federation. (b) Long tops applied in respect of January, February and March, 1970. Metric tons applied from April to December inclusive. (c) Year's average per metric ton.

## Exhibit P-6

P. W. OMalley re Reduction Plant—Aluminium,
Dated December 18, 1968

#### Confident:al

P. W. O'Malley

J. C. Dunstan

Reduction Plant - Aluminum

Fr. Vayne

Marion

267 E

J. H. Thornton

December 18, 1968

In previous conversations, you mentioned our program would be to eventually set up a reduction plant.

The problem is twofold: first, to increase our aluminum consumption to over 100,000,000 lbs., and second, to manipulate our Alcua contract to allow a buildup from outside sources.

For example, we have now committed ourselves to 75,000,000 lbs. for the next 14 years to Alcoa. With this commitment, we cannot possibly build to an additional 100,000,000 lbs. for the next five years.

The total market in 1967 that is available to Essex:

Extrusion 820,000,000 lbs.
ACSR & Bore 499,000,000 lbs.
Insulated Wire 183,000,000 lbs.
1,502,000,000 lbs.

Actually, since we are not competitive in ACSR, our total market, if we assume 10% is our share, would be 17% of 1,000,000,000 lbs. or 100,000,000 lbs. There has been over a 10% a year growth in our product area (wire and billet) in the last five years. 10% of the 1972 market could be 160,000,000 lbs. for Essex

Therefore, to plan for a reduction plant, we must not only increase our aluminus intake from Alcoa but get another short time (five year) source at as low or lower competitive price than Alcoa's price.

Please let me know If you have any specific ideas you wish me to pursue.

JCD:da

WIT. 17 UL 1970 U BAR ASS'R. REPURING SERVICE

J. C Dunstan

# Exhibit P-28

Letter from J. M. Morris to James C. Dunstan Dated July 3, 1968 re Cancellation, Copy to O'Malley and Seifert on July 5, 1968 lall grand

4

Included 715168

T. Se. fert

### NICHOLS ALUMINUM

269E

July 3, 1968

Mr. James C. Dunstan
Vice President and General Manager
Essex Wire Corporation
2601 South Adams Street
Marion, Indiana 46953

PLF. DATE | 70 MET | TOR 10

BAR AS'N REPORTING SEA-ICE

Dear Mr. Dunstan:

Referring to your letters of June 25th and June 28th, we do not acquiesce in your statement of June 25th that Essex "confirms its notice" of cancellation. Our recollection is that you threatened to attempt to cancel, and we do not concede that you have any right to cancel.

Further, we deny your allegations of the failure of the equipment presently owned by Essex to operate as rated, and we deny that there was any guaranteed minimum on the first machine. Of course, we have no direct knowledge of the extent of your expenditures of man hours or money in attempting to operate this machine, but we do know that you refused to accept our offer to make the machine operate to your requirements at a risk of only \$2,500.

Nevertheless, as a matter of preserving our good will, we would recommend to our principals, Continuus and O. T. T., that they accept the offer contained in your letters of June 25th and June 28th provided it is conformed to our suggestion of June 25th that the down payments be returned only when each machine is placed elsewhere. We must report, however, that we have already received strong indications from O. T. T. that they would not accept such offer even as so conformed, and we have received no favorable comment from Continuus on our preliminary explorations of this subject.

We feel that we cannot, by merely acting as an agent transmitting messages, resolve the disputes between our principals and you; and we are urging our principals, by copies of this letter (with enclosures of our prior correspondence with you) to join us in further discussions with you at your convenience.

Yours very truly,

J. M. Morris
President

JMM:Ed

NUCHOLS ALUMINUM COMPANY . P. O TY 3808, DAVENPORT, IOWA 52808 . PHONE 319-324-2121

Letter from James C. Dunstan to Mr. James M. Morris
Dated June 25, 1968 re Cancellation by Essex Wire
Corporation of Purchase Order for Model 8 Continuous
Casting Equipment and OTT Coiler

271 E June 25, 1968

Nichols Wire & Aluminum Company 1725 Rockingham Road P. O. Box 3808 Davenport, Iowa 52008

Attention: Mr. James M. Morris, President

#### Gentlemen:

Pursuant to our meeting held Faidly, June 21, 1958, Essex Wire Corporation hereby confirms its notice to Bickels Wire & Aluminum Company as agent for S.P.A. Continuous that it is cancelling its order (Essex Purchase Order Number 90-0150) for the Model 8 Continuous Casting equipment and OTT coiler scheduled for delivery later this year because of the failure of the identical equipment presently owned by Essex (purchased from S.P.A. Continuous through Nichols as agent) to operate, as delivered, at the guaranteed minimum specification rate of 14,000 pounds per hour notwithstanding the expenditure of substantial sums of money and the loss of over 1,000 man hours of executive time in attempting to do so.

Essex trusts that this settlement will dispose of the matter and that other proceedings will not be necessary to bring this matter to a close.

Yours very truly,

ESSEX WIRE CORPORATION Wire & Cable Division

James & Duns L

James C. Dunstan

Vice President and General Manager

eg

D-274

TELEX from Nichols Aluminum Company to James C.
Dunstan Dated July 9, 1968 Submitting TELEX
Received from Office Technique Des Trefiles

17.74 1 stepled Hathet to Morres and told Mer Aus no mo action that we were going to take. wall as will the whole HAVE ONE LONG ONE ik has contailed hispage deal 1 and is toging to get then one his JOO2 PD FAX DAVENPORT IOWA JUL 9 3AOP CDT JAMES C DUNSTAN VICE PRESIDENT ESSEX WIRE CORP MARION IND PLEGRAM WE ARE TRANSMITTING THE FOLLOWING TELEX TO YOU THAT WAS RECEIVED TODAY FROM OFFICE TECHNIQUE DES TREFICES, 106-108 RUZ DE LA JARRY, VINCENNES, SEINE, FRANCE. PLEASE TRANSMIT THE FOLLOWING TELEX TO ESSEX WIRE
PLEASE TRANSMIT THE FOLLOWING TELEX CONNECTION.
CORP. AS WE CANNOT GET DIRECT TELEX CONNECTION.
ATTENTION JAMES C. DUNSTAN V P ESSEX WIRE CORP.
ATTENTION JAMES C. DUNSTAN V P ESSEX WIRE CORP.
BURTHER TO YOUR CORRESPONDENCE WITH OUR AGENTS
NICHOLS ALUMINUM VE CONFIRM THAT WE CANNOT BE BOUND BY MAKE 28.553 NY DISPUTE ARISING BETWEEN YOU AND MESSES S P A CONTINUUS OF MILANO BECAUSE WE ARE CONCERNS INDEPENDENT FROM EACH OT 1.60.0 FROM EACH OT'

SEEING THE COLLER DELIVERED AT YOUR BELLINGHAM
FACTORY PERFORMS SATISFACTORILY AND THAT YOU ARE NOT IN
A POSITION TO PROVE THAT IT IS NOT ABLE TO FULFIL ITS
ENTY ACCORDING TO TERMS OF YOUR PURCHASE ORDER FORM,
ENTY CAMERILATION OF THE ORDER FOR SECOND COLLER WOULD
BE ARBITRARY AND WE CARROT ACCEPT IT.
THE SECOND COLLER BEING NOW IN THE LATEST ERECTION
STAGE IN VIEW OF RUNNING TRIALS AND ALL MEASURES BEING
ALBEADY TAKEN FOR ITS DISPATCH A FARLY AUGUST WE EGRAM · F ALREADY TAKEN FOR ITS DISPATCH A EARLY AUGUST WE CANNOT AT THIS STAGE ENTER INTO FRIENDLY NEGOTIATIONS
TOWARDS CANCELLATION.
VE MUST ASK YOU TO PLEASE
PRIMO SEND IMMEDIATE PAYMENT FOR 20 PC OVERDUE.
SECUNDO OPEN TELEGRAPHIC LETTER OF CREDIT COVERING
THE 50 PC RALAMOE AS INDICATED IN OPDER FORM.
TELTIO COUFIRM YOUR ACCEPTANCE OF THESE TERMS BY TELEGRAM TELEX RETURN.

SHOULD YOUR SATISFACTORY REPLY BE DELAYED PAST
SHOULD YOUR SATISFACTORY REPLY BE DELAYED PAST
JULY 12 WE MAY HAVE TO POSTPONE DELIVERY BUT WOULD
CHARGE YOU FOR WARRHOUSING AND CORRELATED
INSURANCE CHARGES PENDING PROPER SETTLEMENT. R CORATTE PARSIDENT OTT VINCENES. WIGUOTE MICHOLS ALUMINUM COMPANY OFFICE YEART THE PES TREFILES, 106-108 BUE DE LA JAMRY S P A 20 PC 10 PC 17 RAN 0: MASON CLEAR ..

Memorandum from Edwin C. Murray to P. O'Malley
Dated July 22, 1968 re Aluminum Usage,
Inventory & Requirements

275 E

P. O'milley

Edw. C. Kurray

Aluminum Usago, Inventory & keculrements.

Tt. Mayne

Po. Wajar

ouly 22, 1968

alone has informed us that because of their strike at some of their plants, they can only supply us their commitments under the contract and will not be able to deliver in 1968 some of 1969. "Block A".

In 1968 we will receive the 22,000 N lbs. plus 1.% or 25,300,000 lbs.

As of July 1, 1908 we have used 17,149 h 165. on tale contrast, we enticipate using for the balance of 1968:

Vire & Cable 2,100 M
Utilities 4,80 M
Expect 2,200 M
Letal Frances 17,000 M

We will be short of base metal by 4,250 N lbs., Coldwater not included. However & Thornton states that they have snough commitments to last the belance of the year.

With your approval, we will use the remaining metal where the most cost savings and purchase from an outside source the remainder of our needs.

Examble, the items Jeffersonville uses & Alcos has a mark up greater than or equal to, computative odds or attembust do not have as great a cout savings as others.

Edd. G. ....

20 /bjr.

D-7.25

Service of copies of the within admitted this 14th day of Marie 1975

Signed

Attorney for Plaintiff Appellee.

5 COPMENCEIVED

MAICK 14

TAUL WEISS, RIFAIND, WHARTON & GARRISON

BY 148